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GAZETTE
FOUNDED NOVEMBER 14, 1937, LOS ANGELES, CALIFORNIA

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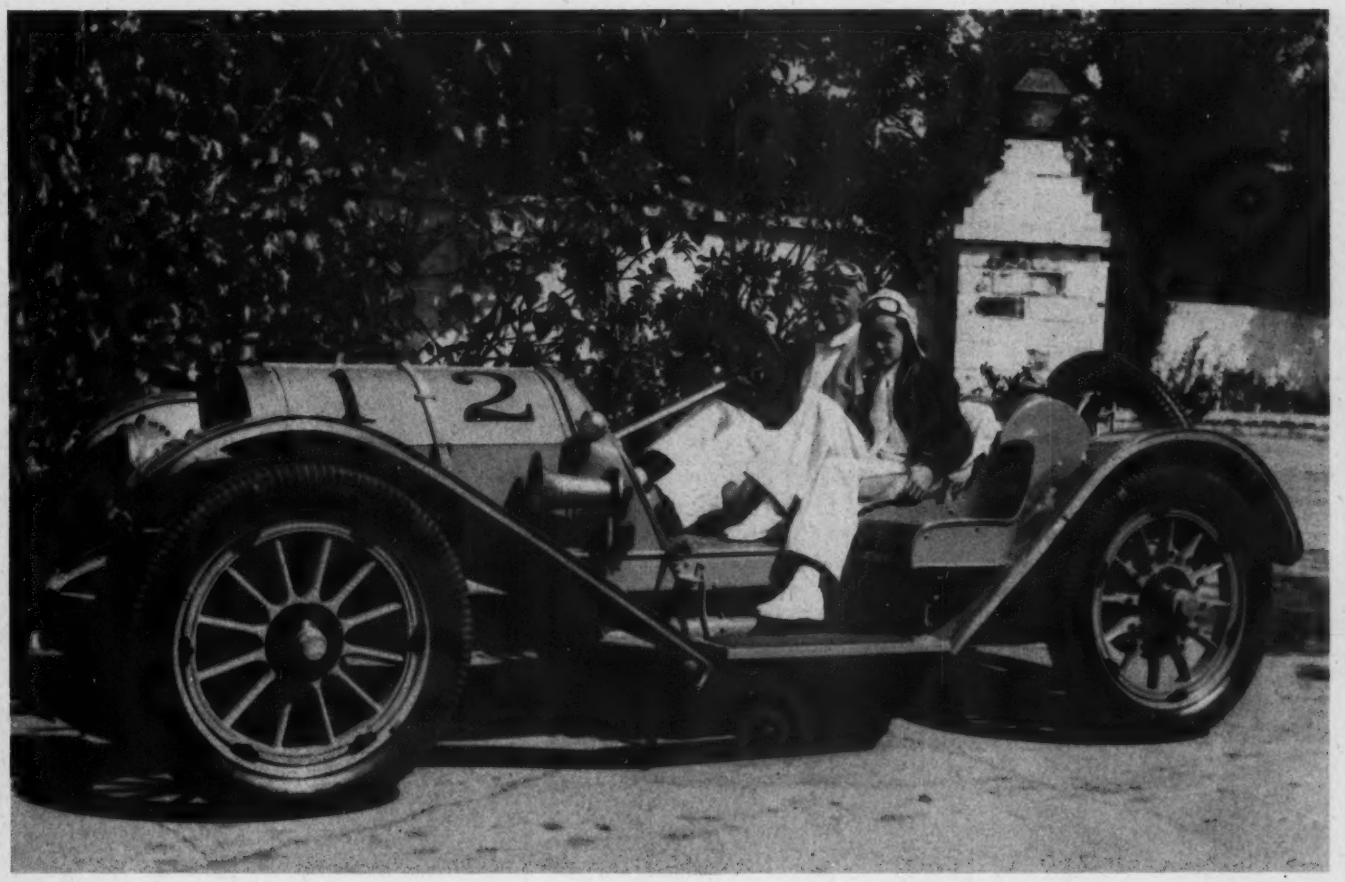

BOB BUSBY AND FRANCES BAKER IN 1910 MERCER RACEABOUT

SEE PAGE 27

THE HORSELESS CARRIAGE CLUB

Founded in Los Angeles - November 14th, 1937

A non-profit corporation founded by and for Automotive Antiquarians and dedicated to the preservation of the old time automobiles together with their accessories, archives and romantic lore.

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THE
HORSELESS CARRIAGE CLUB GAZETTE

Official Publication of The Horseless Carriage Club.

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A MESSAGE FROM OUR NEW PRESIDENT.

By STEADMAN G. SMITH, President.

TO ALL MEMBERS OF THE HORSELESS CARRIAGE CLUB:

It is a great satisfaction for me to contribute whatever I may be able in an effort to accomplish any purposes for which this Club is organized. The war has now ended with victory to our forces which served so well at home and abroad. For the decisive defeat of our opponents we are grateful. For the safety of our home land and the opportunity of returning once more to peaceful pursuits, we also voice our thanks.

As we once more take up those civilian activities which were dropped or curtailed in December, 1941, we may very justly feel that our Club should render an even better and more complete service than ever before. It now is and for some years has been the intention of your Board of Directors and Officers to encourage and extend the interest in our hobby in several different ways. We will welcome active participation of all members in the accomplishment of good results. Suggestions of a constructive nature will be received with favor and enthusiasm from all sources. Let us unite to see that our activity is not only a greater pleasure but a finer accomplishment than it has been before.

(CONTINUED ON PAGE 28.)

Articles appearing in The Horseless Carriage Club Gazette, contributed by members, express the individual opinions of the writers, and are not necessarily the opinions of the Editors. Permission is granted for reprinting articles appearing in this issue if credit is given to The Horseless Carriage Club Gazette.

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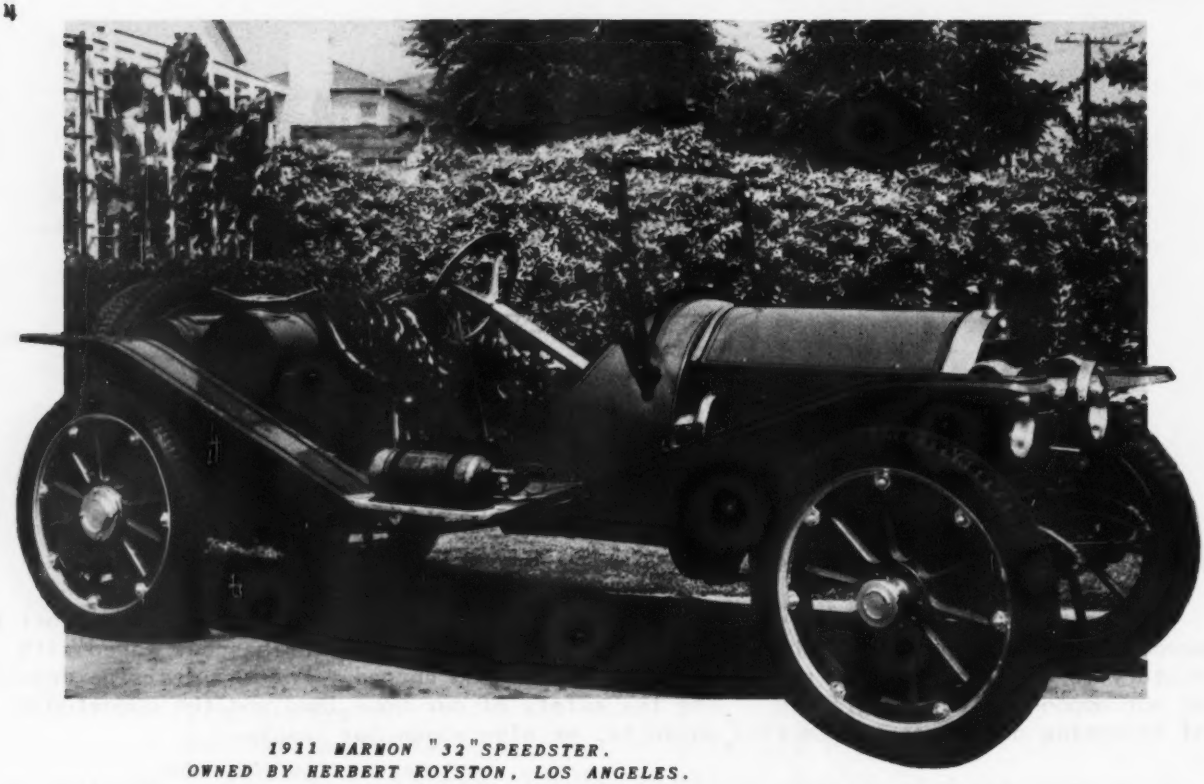
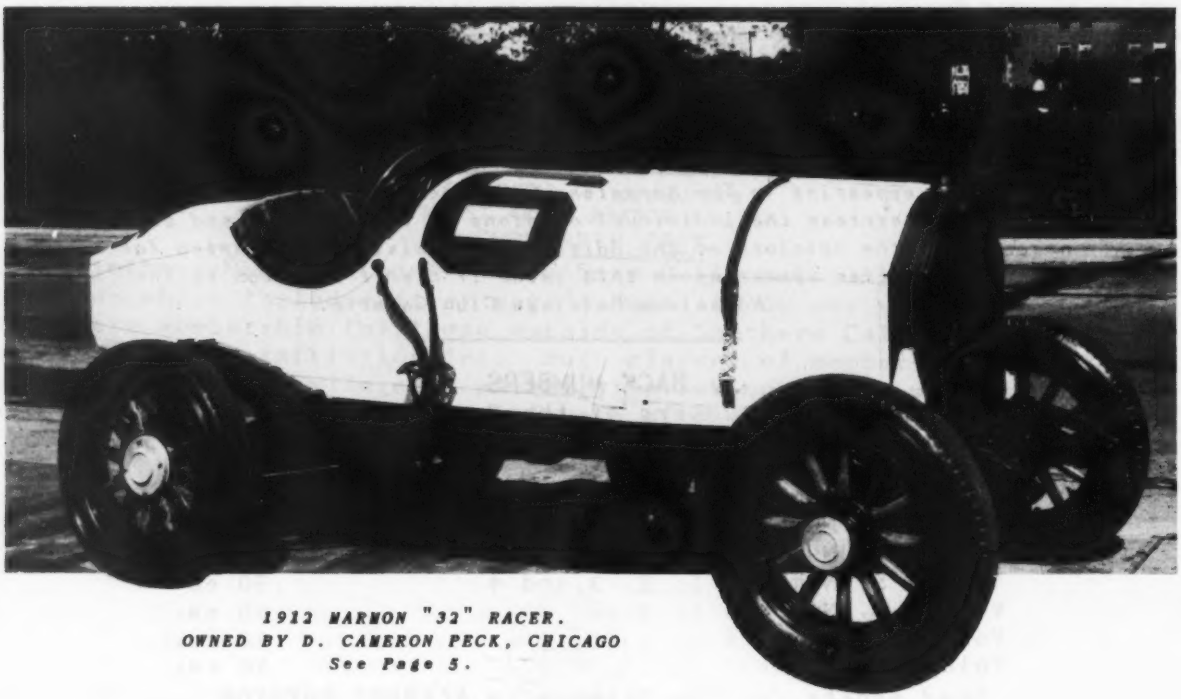


1911 MARMON "32"SPEEDSTER.
OWNED BY HERBERT ROYSTON, LOS ANGELES.
See Page 5.



1912 MARMON "32" RACER.
OWNED BY D. CAMERON PECK, CHICAGO
See Page 5.

MERCER AND STUTZ TAKE BACK SEAT.

By Herbert Royston.

There has been a great deal of controversy, pro and con, as regards the relative merits of the Mighty Mercer, and the Sturdy Stutz. Some claim that the Mercer was a better car than the Stutz, while others are just as positive that the Stutz was better than the Mercer.

However, we hear very little about an automobile that was better than either the Mercer or the Stutz. That automobile was the Marvelous Marmon. The reason is probably that there are so few old Marmons in existence that few people take the trouble to extol the merits of that fine automobile.

No doubt there are many who will not agree that the Marmon was superior to either Mercer or Stutz. In order to combat the opinion of these folk all that is necessary is to cite the wonderful record of the Marmon in the early days of automobile racing, when Marmon proved its superiority on every major track in the country.

During the years of 1909, 1910, 1911, and 1912, Marmon cars started in 103 long-distance races. These cars covered more than 6200 miles at an average speed of close to 68 miles per hour. They won 54 first places, or more than half of the total number, including such victories as the First International Sweepstakes, a 500 mile grind, in which the Marmon demonstrated its superiority over the pick of Europe's and America's best cars by covering the distance on three of the original tires without having to lift the hood or add water to the radiator. The Cobe Cup race, 200 miles; the Wheeler-Schebler Trophy race, 200 miles; the Vanderbilt-Wheatly Hills Trophy, 189 miles; the Atlanta Speedway Trophy, 200 miles; Atlanta A.A. Trophy, 120 miles; Remy Grand Brassard and Trophy, 100 miles; the Grand Prize, 100 miles, and Two-hour Free-for-all, 148 miles at Los Angeles The Kane County Trophy, 170 miles; City of Atlanta Trophy, 200 miles; Savannah Challenge Trophy, 276.8 miles; and the Jacob Jepsen Trophy at Santa Monica, besides many other events. This unparalleled list of victories, which brought to Marmon the most imposing group of trophies ever won by any one make of car, was a record of unfailing reliability that was not approached by any other make of car in that era. Every one of those contests was designed to try a car to its utmost. In the majority of them, there was no necessity of giving attention to any part of the mechanism of the Marmon.

Marmon victories in long-distance touring competition were equally consistent. Three Glidden Tours were finished with perfect road scores. In the 1911 Minneapolis Journal Trophy Tour, the Marmon was the only registered stock touring car to cover the 1461 miles between Minneapolis and Helena, Montana, with a perfect score. This performance was duplicated in the 1912 run of 1088 miles to Winnepeg and return for the same trophy. In neither of these events, nor in the 1912 Four States Tour of 1267 miles through Ohio, West Virginia and Kentucky, was it necessary to do anything further than to supply fuel and oil.

The Marmons pictured on page 4 are probably the only "32"s in existence. The Speedster is a regular stock model produced by the

Continued on Page 15.

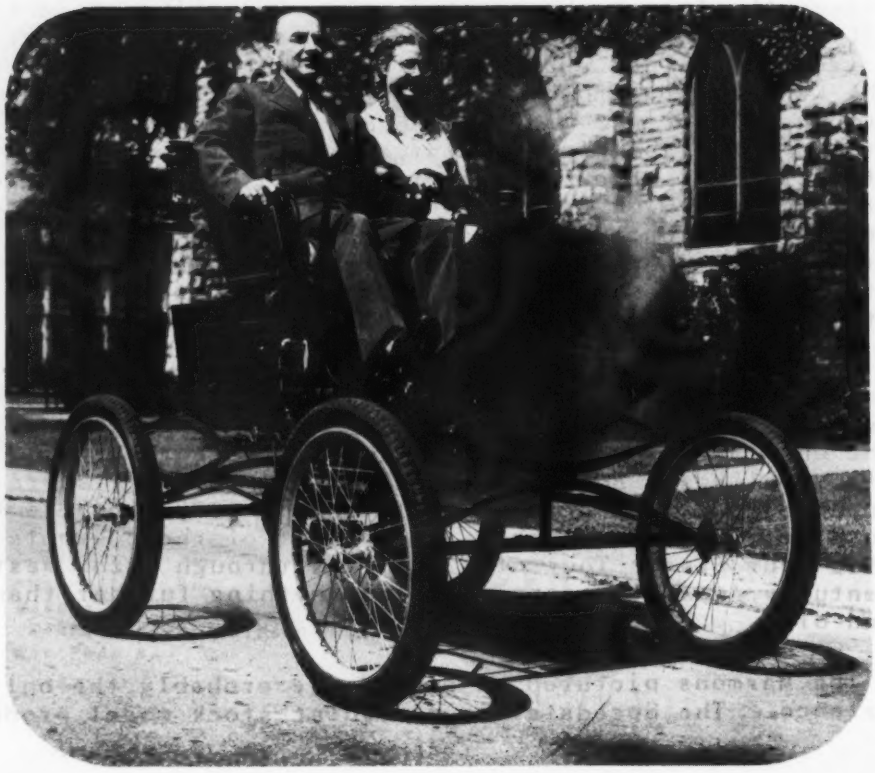
CHICAGO GOLDEN JUBILEE.

(TOP)

Museum of Science and Industry at Chicago grooms old-time cars for appearance in re-run of America's first "motocycle" race held at Chicago, November 28th 1895. Car to the left is a 1905 Mier, right a Schacht 1905.

(RIGHT)

Major Lenox R. Lohr and his daughter Barbara take an afternoon spin in a Locomobile Steamer of 1900. The car is from the collection of Major Lohr, President of the Museum of Science and Industry at Chicago



CLUB MEMBERS ATTEND GOLDEN JUBILEE IN CHICAGO.

By RANSOM and ELIZABETH MATTHEWS.

Climaxing a month of special events in commemoration of the fiftieth anniversary of the first automobile race in America at the Chicago Museum of Science and Industry, whose President is Major Lenox R. Lohr, Thanksgiving Day, November 22, 1945 saw the re-enactment of the 1895 race in the form of a Parade of Cars over the identical route.

Lining up before the east entrance of the Museum at 8. A.M. in the first snowstorm of the season, 29 antique cars from 1896 to 1930, a World War II Weasel manned by United States Marines, and a fleet of 1946 models left at 9:15 A.M. for the 25 mile run thru Chicago to the Northwestern University at Evanston, Illinois.

Starting the race amidst much publicity by radio announcers, picture taking pressmen and a band, were Mr. J. Frank Duryea of Madison, Conn., driver of the winning car in the 50-year-ago race, and Mr. Charles B. King of Larchmont, New York, a participant in the original run, in an 1896 Duryea owned by Messrs. Waterman, Gibson and McKean of the Belcourt Museum at Newport, Rhode Island. Mr. Duryea and Mr. King, whose keen interest in all of the events was an unforgettable inspiration, then retired to modern heated cars and left the manipulation of the Duryea to Mr. George Duryea of Buffalo, N. Y., and an assisting mechanic. They were accompanied by Mrs. Duryea who had assisted with plans for the preparation of the Duryea. All are honorary members of The Horseless Carriage Club.

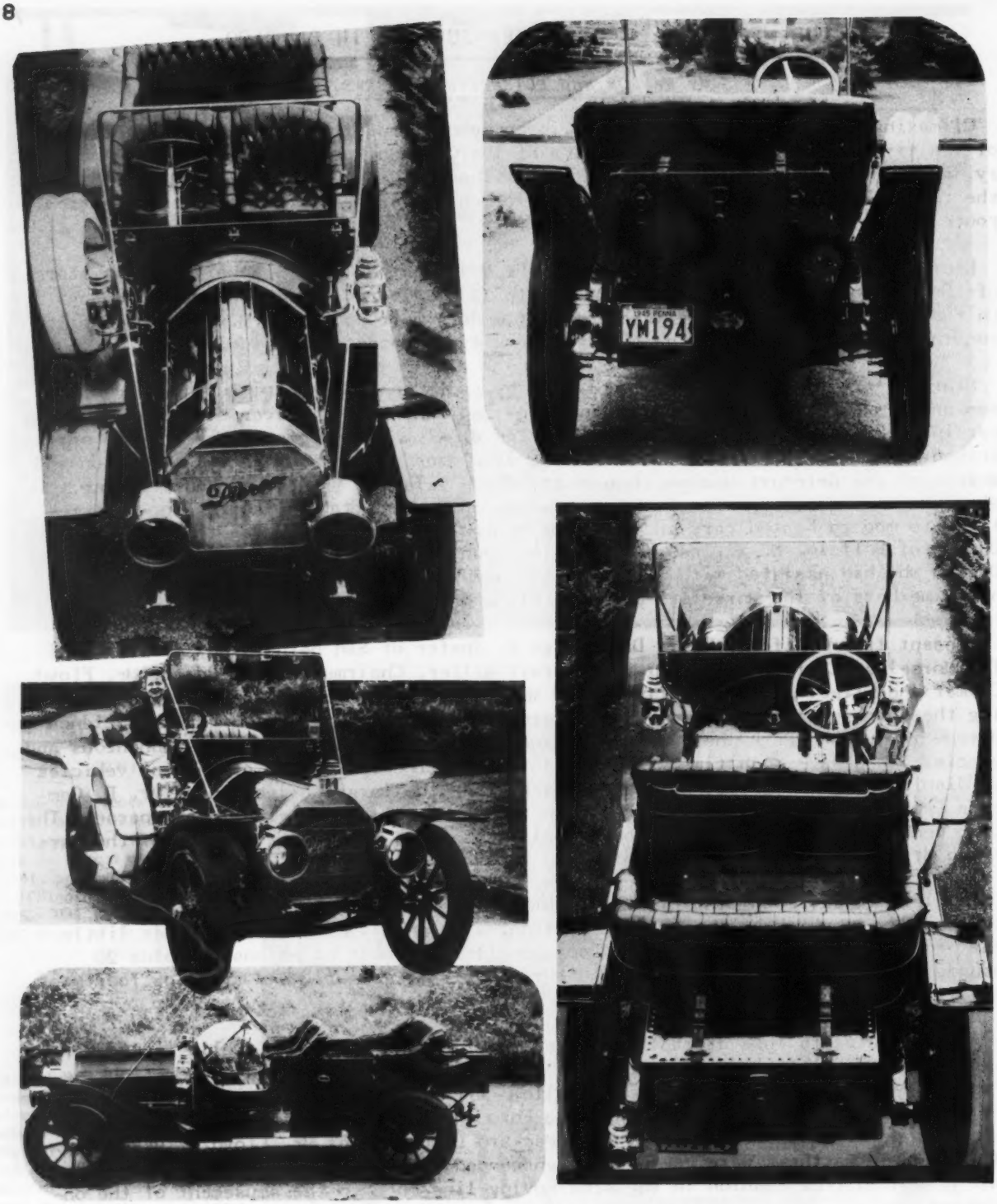
Present from California were Dr. George E. Shafer of San Bernardino, President of The Horseless Carriage Club; Mr. W. Everett Miller, Chairman of the Board; Mr, Floyd Clymer and Director Ransom Matthews and Mrs. Matthews. During the busy week preceding the Thanksgiving Day event, the visitors were cordially received at the Science Museum in Jackson Park where they were guests of Major Lohr at numerous luncheons and special lectures. Much time was spent in viewing the collection of ancient vehicles on display and in the vast storage rooms housing the large collection of Mr. D. Cameron Peck, the Curator of Transportation, who drove a 1930 Minerva in the parade. The Club members were also given an opportunity to advise on the restoration of the cars to be driven and to test-drive them thru Jackson Park.

Needless to say, our Club President, Dr. Shafer, was on hand bright and early for the parade, in which he was assigned a front seat in a 1904 Cadillac. This little car proved its worth by holding up Doc and his 240 pounds of enthusiasm plus 20 pounds additional winter clothing and three other passengers, and arriving fourth at the finish.

All participants wore attractive badges showing the Duryea car, while lap robes, ear muffs, gauntlets and goggles were the order of the day. Floyd Clymer, looking typically Eastern, drove a 1905 Oldsmobile. Mr, Miller arrived in town just in time to grab a ride in a thoroughly open 1908 Ford and was seen on the return trip in the enclosed portion of the beautiful 1907 Packard Limousine of Mr. Lloyd C. Partridge. Mr. and Mrs. Matthews were comfortably ensconced in a 1924 Ford Coupe which lurched and jerked in true fashion in the slow moving line much to the amusement of the onlookers.

Major Lohr, muffled in a great fur coat, and his mechanic rode up and down beside the cars, creating a sensation in a whistling 1922 Stanley Steamer and encouraging the shivering drivers. Special motor cycle police escorted the parade thru all of

(CONTINUED ON PAGE 23)



1909 PIERCE ARROW, MODEL "36", 4 PASSENGER MINIATURE TONNEAU.
OWNED BY SAMUEL E. BAILY, PHILADELPHIA.

LOCOMOBILE AND PIERCE ARROW QUALITY.

By J. M. Carpenter.
Member St. Louis, Mo. Regional Group.

Every concern engaged in manufacturing, milling, printing, of in any industry requiring the use of machinery, realizes that the best railroads do not use low priced locomotives, but on the contrary purchase the finest product available in order to provide fast, safe and continuous service at low maintenance cost. So it was, on this theory of quality, that some of the old automobile manufacturers designed and marketed their products. They built the best automobiles that human ingenuity could devise, durable pieces of machinery that remained things of beauty and service over a period of a quarter of a century.

Standing side by side on quality production for more than 25 years, and matching each other in the excellence of their products, the Locomobile Company of America at Bridgeport, Connecticut, and the Pierce Arrow Motor Car Company, (formerly the Geo. N. Pierce Co.,) at Buffalo, New Youk, produced in all probability the most universally accepted high priced, high quality cars in the United States. Locomobiles and Pierces were the luxury cars seen everywhere, in the smaller cities as well as the great metropolitan centers, in spite of the premium price that painstaking manufacturing and top quality materials demanded. There were other fine competitive cars of course, Stevens-Duryea, Crane-Simplex, Thomas, White, Chadwick, Peerless and Packard (30s and twins), but Pierce and Locomobile had the public acceptance and distribution that outnumbered all of the above together with the exception of Packard. In order to properly describe both, an attempt will be made to compare mechanically and structurally the most popular model: in each instance the 48 HP (ALAM rating) chassis.

Brief mechanical specifications were as follows, Six cylinders cast in pairs. T-head design with intake and exhaust valves on opposite sides, 4½ inch bore by 5½ inch stroke, magneto ignition and four speed gear-sets located mid-ship in the frame, were distinctive points of similarity. Both also originally had a dual ignition system, magneto and battery firing two sets of spark plugs independently. When increasid motor speed demanded better synchronization of the firing Locomobile employed a two-spark Berling magneto and Pierce Arrow went over to a double Delco battery system. Opinion was that the Pierce Arrow motor promised longer life than that of its competitor because of a full pressure lubrication system to all motor moving parts. Locomobile stood pat with a combination splash and pressure system. Actually both had a longer life than was desirable for their own welfare because one day the saturation point arrived in the market for high priced, heavy cars, that were made too well to wear out. It is interesting to recall the bronze motor base of the Locomobile, great strength and rigidity were obtained in this manner, and also a bronze gear box. Pierce always used an aluminum crank-case and gear box, with bronze valve bases and brass in-take manifold. It made a beautiful picture to keep the aluminum crank-case wiped clean of oil, and brass and bronze parts polished.

It is also interesting to remember how different these cars were mechanically as well. Locomobile in all of the six cylinder jobs had a multiple disc clutch, while Pierce used a leather faced cone. The Pierce cone clutch was remarkably smooth in operation, provided frequent applications of neatsfoot oil were supplied. Both cars were unusual in their ease of operation. The gear shifting trick was readily acquired, sometimes it was necessary to double clutch on the Pierce, but in comparison to thesize, weight, and power of the cars, was so easy that I have taught many novices to drive more quickly on Pierces and Locos than with smaller and lighter cars. The ease in driving was also facilitated by the four speed transmission: when the car slowed at all, almost by instinct you dropped down into third and were off to a quick

(CONTINUED ON PAGE 29.)

A MISTAKE IN THE CATALOGUE.

An acquaintance of mine, after pitying all his friends who had to crank their motors bought one which, he read in the catalogue, could be started without this laborious process. All that was necessary to do, according to the catalogue, was to turn the flywheel to a certain position, snap the igniter, and off it would go. He tried it but was not satisfied with the result and sent for me. I followed his call and went to work trying to start the machine, following the printed directions. At times we would get an explosion, but the engine would never get under way sufficient to make the compression for the next charge (it being a four cylinder engine). It could be started by hard cranking and would run fine after being once started, but I had to give up the attempt to start as per catalogue, much to his disgust.

He got the makers over the phone, and after he and I had used up $4.00 worth of the juice without getting any satisfaction, he ordered an expert to come. This fellow got along in a day or two. He was a slick looking Dutchman, presenting more the appearance of a stock broker than a mechanic, was a giant in size and strength, and was very careful about not soiling his hands or his clothes. He looked things over, paid me much attention, the owner little, and decided that everything was as it should be, and that the motor should go.

"That's what I have got you here for," the owner spoke up thinking, perhaps, we were losing valuable time, or getting nervous on account of the increasing audience, "I want to see you start it."

I shall never forget what followed. The expert took plenty of time in getting off his coat, folding it up and putting it away, rolled up his sleeves and started in. He did not do as we had been doing; nor did he even attempt to follow the directions of the catalogue, but asked for a wire nail. This aroused our curiosity; the nail was quickly forthcoming and we soon found out why he

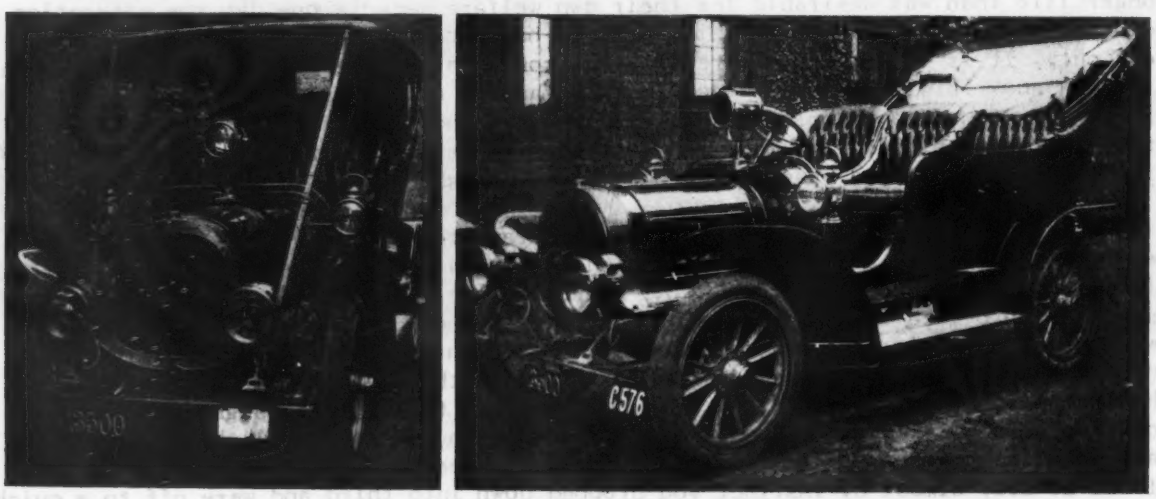
Continued on Page 15.

The Pope-Hartford Model F.

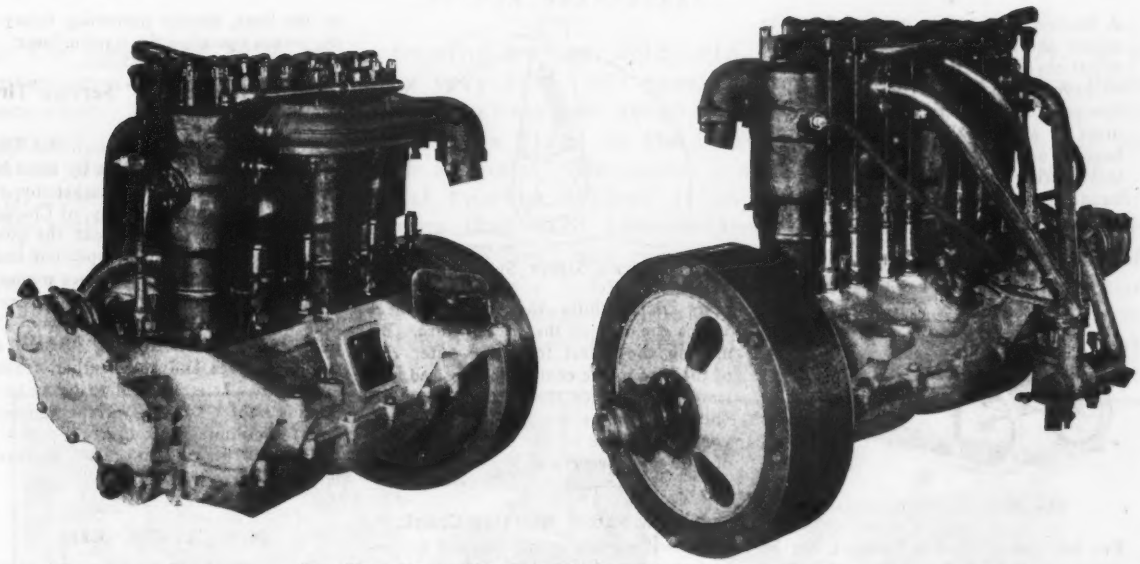
The Hartford branch of the Pope Manufacturing Company, after changing last year from single to double cylinder construction, have this year brought out a four cylinder touring car of 20 to 25 horse power, built generally along European lines, in that it has an upright motor in front, a sliding gear transmission and shaft drive to the rear axle. The body is of the side entrance tonneau type, seating five persons, and the car generally is of a very attractive appearance. It is fitted with large fenders (flaring in front), continuous running boards and a Cape top.

The cylinders are cast in pairs, with integral water jackets and heads, in which latter the inlet and exhaust valves are located. Both sets of valves are mechanically operated and interchangeable. The crank case is of aluminum, and the gears for the cam shaft and pump are enclosed at the forward end. The carburetor used is of the company's own manufacture. A supply of 15 gallons of gasoline is carried. Ignition is by jump spark. The combined commutator and secondary distributer is located at the right hand side of the engine upon a shaft extending at an angle through the wall of the crank case, and driven from the cam shaft by spiral gears. Only a single coil is used. Spark and throttle are controlled by levers located on top of the steering wheel, but not rotating with it. The engine bearings and cylinders are lubricated by an oiler secured to the dashboard and driven by a belt from the rear end of the cam shaft. Other parts of the engine are lubricated by splash.

The transmission is of the sliding gear type, giving three speeds ahead and one reverse. It is enclosed in an aluminum case, with a readily removable aluminum cover. The shafts of the change speed gear are mounted in gearings bushed with phosphor bronze, the countershaft being mounted in three bearings. The gears and bearings, with the exception of the front and rear main bearings, are immersed in oil; the front and rear bearings are lubricated from two oil wells in the bearing case, the oil being carried by a ring to the shaft. The



FRONT AND SIDE VIEW OF POPE-HARTFORD MODEL F.



TWO VIEWS OF THE NEW POPE-HARTFORD FOUR CYLINDER ENGINE.

gears are shifted by a hand lever located on the right hand side of the seat, operating through a sector and pinions. A rack on the inside of the gear case is directly connected with the sliding gears, the thrust at this point being taken up by a substantial ball thrust bearing. A compensating joint is located between the engine and transmission, and the drive from the transmission is through a longitudinal or propellor shaft having universal joints at either end, through a pinion and bevel gear to the rear axle. Provisions are made to insure efficient lubrication of the joints.

The bevel gears driving the rear axle are made from special steel; the pinion shaft is made integral with the pinion and runs in two Timken roller bearings. The rear axle driving shafts have squared ends, which fit in square holes in the differential gears. The shafts are securely keyed and locked at their outer ends in the wheel hubs and do not carry the weight of the car, but are solely power transmitters, the case and outer tube of the axle carrying the weight. The thrust of the bevel driving gear is taken up by a large ball thrust bearing. The front axle is a solid steel forging, having forked ends to receive the pivots. The frame is composed of armored ash side pieces 1 5-16 by 4 inches at the centre. The armor consists of steel plates three-sixteenth inch thick securely bolted to the side pieces after all the riveting (which is done hot) is completed. The sub-frame, which carries the engine, is made of channel steel securely riveted to steel cross members at either end.

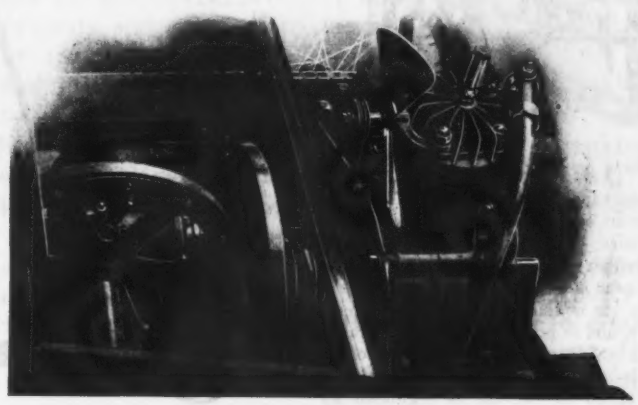
The steering mechanism consists of a worm and sector enclosed in a case packed with graphite grease, and is strictly irreversible. The steering joints are provided with spring buffers to relieve road shocks. The car is provided with two sets of brakes, one an external contracting band brake, faced with camel's hair belting and acting on a drum attached to the transmission shaft directly at the rear of the transmission case —the other a set consisting of two internal band brakes, also faced with camel's hair belting, and acting on drums bolted to each rear wheel hub. The brakes are claimed to be all of ample proportion and of strong construction. The dash is of curved sheet steel, reinforced with wood, finished in natural color and surmounted by a brass rail. The car has a wheel base of 98 inches and a tread of 56 inches. The wheels are 32x4 inches front and rear, with ball bearings of large dimensions.

The Pope Manufacturing Company also continue the manufacture of their two cylinder, 18 horse power touring car, Model G.

The New Orient Buckboard.

There have been some radical changes made in the design of the Waltham Manufacturing Company's Orient buckboard for 1906. The engine is now mounted on the frame and thus spring suspended, and the drive is transmitted by a friction disc drive and side chains, instead of by spur pinion and gear, as formerly. The frame and seat have also been modified, and the buckboard now approaches the sloping back runabout in appearance.

The motor is a single cylinder air cooled one of 4 horse power, mounted on the frame directly over the back axle. It is of 3¼ inches bore and 4¼ inches stroke. The cooling is assisted by a four blade fibre fan mounted in front of the cylinder and driven off the crank shaft. The carburetor is of special design, and ignition is effected by jump spark with current, from a four cell dry battery, a wipe contact interrupter being used. Gasoline to the amount of 3½ gallons is carried in a tank back of the seat. Lubricant is fed to the motor from a sight feed oiler operated from the dash.



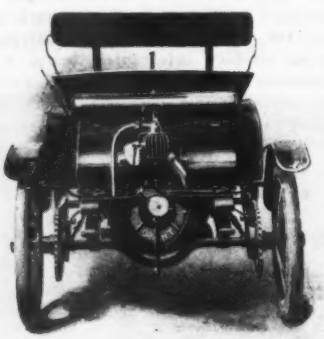
DRIVING MECHANISM OF ORIENT BUCKBOARD.

A friction driving disc is carried on the motor shaft, which engages a friction wheel covered with a special fibroid, said to have unusual properties of adhesion. The pressure of contact between the two discs is applied through a ball thrust bearing mounted back of the metal disc, this bearing being connected to the left hand foot lever. This lever is provided with a ratchet and pawl locking device, the ratchet having five notches, so that

THE NEW ORIENT BUCKBOARD.

five degrees of contact pressure can be obtained, suitable for different degrees of traction resistance. The driven friction wheel is mounted on a cross shaft, fitted at its ends with sprocket pinions, from which the power is transmitted to the rear wheels by chains.

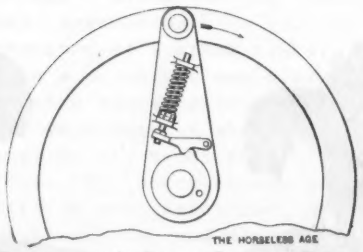
The buckboard has a trussed frame of ash sills, and is provided with a hood and duck back. The frame is carried on 19 inch full elliptic springs at both ends. The axles are both of 1 inch solid steel, and carry 26 inch wood rim wire wheels shod with 2½ inch Goodrich single tube tires. The wheel base of the buckboard is 80 inches, and the standard gauge 42 inches, though the normal gauge, 56 inches, can be furnished. The weight of the car complete is 525 pounds, and the



REAR OF NEW ORIENT BUCKBOARD.

seating capacity two persons. The lowest point of the running gear has a road clearance of 10 inches. The body is finished in natural wood, while the running gear is painted red.

The car is steered by a tiller, as heretofore, and is provided with band brakes acting on drums on the driven sprocket wheels and operated by a foot lever. The speed of the car is regulated by means of a hand lever at the side of the seat, which shifts the friction wheel across the face of the friction disc. By moving the wheel from the outer rim of the disc to the centre, any desired forward speed inside the maximum can be obtained, and by moving the wheel beyond the centre of the disc the motion of the car is reversed.



SCHOONMAKER'S SAFETY STARTING CRANK.

A New Safety Starting Crank.

A novel starting crank designed to prevent the possibility of back kicks in starting a vehicle motor has been invented by Mr. Schoonmaker, of 84 South Fullerton avenue, Montclair, N. J. The hub of the starting crank is free upon a shaft, and outside the hub is arranged a collar with a projection similar to a cam on its outer surface. A short lever is pivoted on the arm of the starting crank, and a nose on this lever is forced into contact with the outer surface of the collar by means of a coiled spring which rests against a lug on the arm of the starting crank, and exerts its pressure against an adjustable collar on a rod secured to the lever. In starting the motor by turning the crank, the rotary effort is transmitted from the crank to the shaft through the collar fastened to the end thereof, the coiled spring being adjusted sufficiently tight so the nose on the lever arm will not pass by the projection on the collar. If, however, the reaction is suddenly increased abnormally, as in case of a premature explosion in the cylinder, the spring compresses sufficiently to allow the projection on the collar to pass by the nose on the lever, thereby preventing injury to the person operating the starting lever.

"WINDJAMMER" AIR PUMP.

The "Windjammer" Service Tire Pump.

A pump designed to lessen the labor of inflating pneumatic tires by hand has been placed upon the market by the Motor Car Supply Company, of Chicago. As will be seen from the cut, the pump is of the usual plunger type, but comprises two oscillating cylinders mounted on a common base and worked by a very long hand lever between the two. The pump has close bottoming pistons, accessible valves and sole leather, feather edge cups. It is claimed to be 12 to 15 pounds lighter than the ordinary pumps, and to minimize the effort required to operate it, owing to the increased leverage.

New "Leader" Cars.

The Columbia Electric Company, of McCordsville, Ind., are building for the 1906 market a runabout, with 12 horse power double opposed motor, 3 inch clincher tires, 28 inch wheels, 76 inch wheel base and buffed leather upholstering; also a double side entrance tonneau, with 16 horse power double opposed motor and 30x3½ inch tires. Both cars are sold with full equipment and guaranteed for one year.

Trade Literature Received.

E. J. Loring, Somerville, Mass.—A folder telling about the Loring automobile speed gauge.

New York Gear Works, 56 Greenpoint Avenue, Brooklyn.—Booklet on the ball transmission gear.

Fairbanks, Morse & Co., Chicago.—Catalogue No. 101A regarding gasoline motor cars for railroad work.

Cullman Wheel Company, 1022 Dunning Street, Chicago.—Catalogue No. 5 of sprocket wheels and chains.

Hall Manufacturing Company, 62 Cliff Street, New York City.—Catalogue of Hall's lubricating devices and their appurtenances.

C. L. Altemus & Co., The Bourse, Philadelphia, Pa.—Leaflets, "Perfect Synchronism" and "A Practical Distributer Perfectly Synchronized." They also tell of their special soot-proof spark plugs.

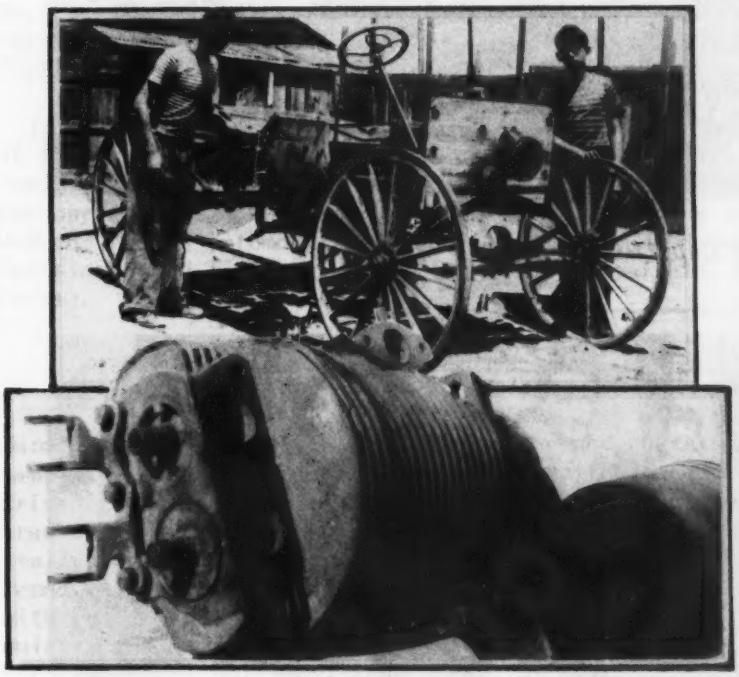
Ford Motor Company, Detroit, Mich.—Advance pages showing Model N, 15 horse power, four cylinder runabout; Model K, 40 horse power touring car, and Model F, a two cylinder opposed combination runabout and touring car.

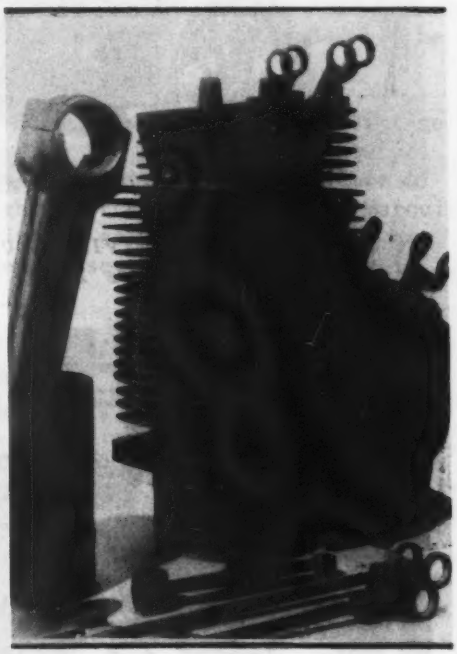
Bethlehem Steel Company, South Bethlehem, Pa.—Four booklets, "Specifications for Locomotive Forgings," "Production in the United States of Heavy Steel Engine Guns" and "Armor Plate Forgings" and "Nickel Steel: Its Practical Development in the United States."

HOW I CAME TO BE A COLLECTOR OF ANTIQUE AUTOMOBILES.

BY BEN SHARPSTEEN.

In the summer of 1939, while touring through Goldfield, Nevada with my family, we discovered what seemed to me to be a very rare, old gasoline wagon in the yard of a desert prospector. My two boys were very curious and asked me many questions that I was unable to answer. However, my imagination was fired to the point where I could visualize myself as the proud owner of a rare antique. Thereupon I made a deal with the owner, "High Power" Bill, and had a local trucker deliver it to my home near Los Angeles. After I regained my equilibrium following that wild transaction I began to evaluate my acquisition. Fortunately, the name "Economy" was cast in brass on the foot plate so after consulting Glasscock's "The Gasoline Age", I found my "wagon" to have been manufactured by the Economy Motor Buggy Works of Kankakee, Illinois in the year 1906. This naturally was quite a blow to my ego, as I had fancied the year of manufacture back to at least



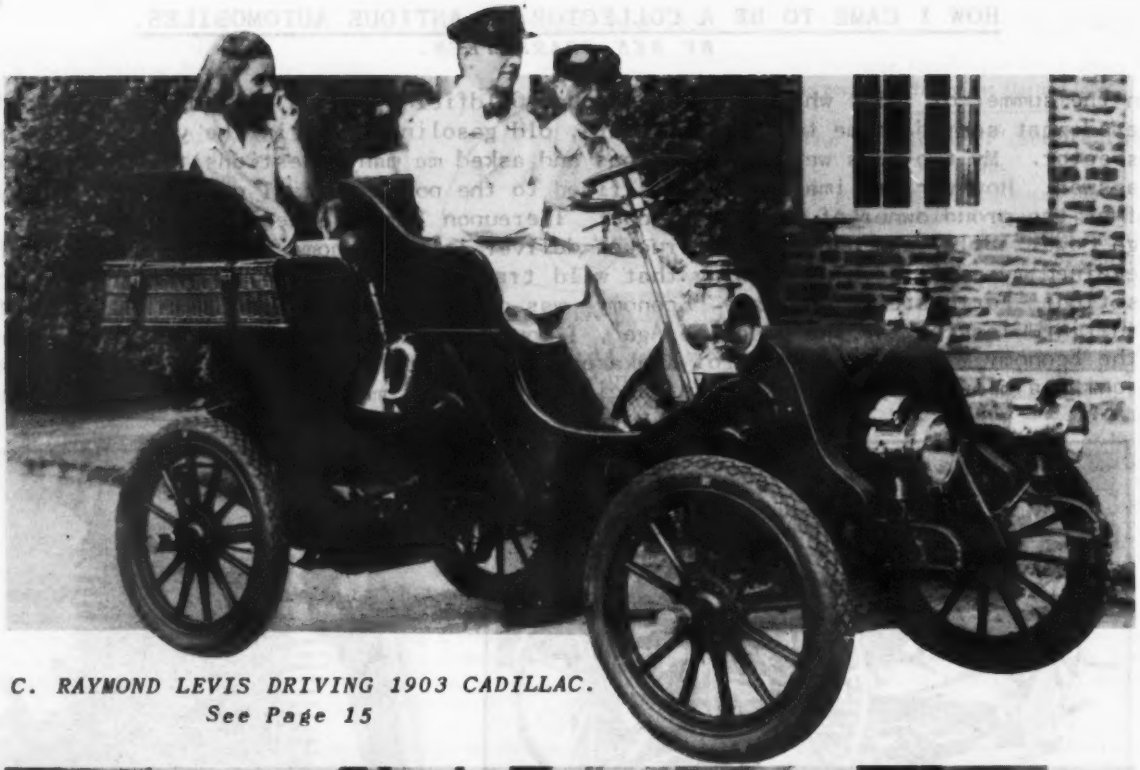


1895. To make matters worse, one of the original two cylinders was missing along with the piston and con rod.

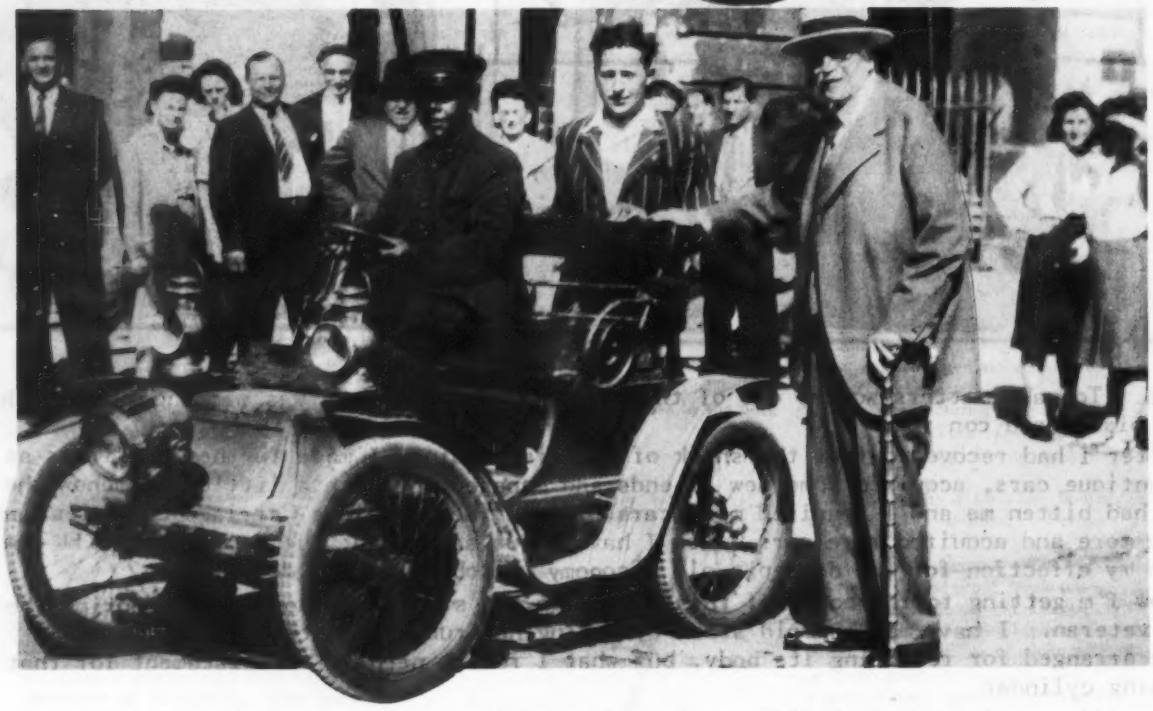
After I had recovered from the shock of the disillusion, I made further inquiries as to antique cars, acquired some new friends and managed to learn a little. Somehow the bug had bitten me and I acquired more cars, joined The Horseless Carriage Club, learned some more and acquired more cars. Now I have about seventeen, but somehow I still can't lose my affection for the decrepit old "Economy" I robbed of its desert home.

Now I'm getting to the point of this narrative. I still have hopes of restoring the old veteran. I have made a bold start by having new rubber mounted on its rims, and have arranged for restoring its body, but what I really need is a replacement for that missing cylinder.

The illustrations show the "Economy" as it was discovered by my boys in Goldfield along with closeup details of the one remaining cylinder, piston, con rods, push rods, etc. The bore of the cylinder is 4¾ inches. If anyone reading this article could give me any information regarding the "Economy" or better still as to where I might find a cylinder to match, I would appreciate hearing from him. My address is 2324 Panorama Drive, La Crescenta, California.



C. RAYMOND LEVIS DRIVING 1903 CADILLAC.
See Page 15



THE MARQUIS DE DION, (Right), AND 1898 DE DION.
See Page 15

PICTURES ON PAGE 14.

Pictured at the top of the page is member C. Raymond Levis of Wardour, Annapolis, Maryland, who is seen in the driver's seat of his fine 1903 one-cylinder Cadillac, enjoying the Spring atmosphere of beautiful Maryland. With Mr. Levis in the front seat is Mr. Levis' father, 84 years young, who never misses a chance to go touring in his son's antique vehicles. In the snappy tonneau, which is equipped with ample wicker lunch basket, are Mr. Levis' daughter, Jane (left) and Mr. Levis' cousin, Caroline Garrett, (right).

In addition to this Cadillac Mr. Levis owns fourteen other antique automobiles including a 1906 Orient Buckboard, 1901 Foster Steam Car, 1902 Rambler Roadster, 1900 DeDion-Buton Voiturette and a fine 1910 Oldsmobile Autocrat Touring car. In the Fall of 1945 Mr. Levis drove the Oldsmobile Autocrat to a Field Meet of The Veteran Motor Car Club of America, in Connecticut, a round trip distance of more than 475 miles. Mr. Levis' father accompanied him on this trip. After attending the Henry Ford Conclave at Dearborn, Michigan, this Summer, we understand that Mr. Levis' slogan will be "California Here I Come".

In the lower picture the Marquis DeDion poses with a DeDion 3½ H. P., of the vintage of 1898, on Place de la Concordi, Paris, France. Seated in the car is the Marquis' chauffer for the past 48 years. Behind the car stands Henri Girod-Eymery, (owner of the car), 2 Rue de Poissy, Paris 5, France. To the right of the car stands the Marquis DeDion, French automobile pioneer. (Picture and description sent to The Gazette by Captain Edward T. Francis, 141 16th St., Bloomfield, New Jersey, while stationed in Paris).

MERCER AND STUTZ TAKE BACK SEAT.

Continued from Page 5.

Marmon factory in 1911. While the motor and chassis of this car are substantially the same as in the "32" racer pictured below, the Speedster is not geared up and can be driven comfortably in city traffic. Both of these cars have the famous Marmon "barrel" crankcase. This crankcase is a one piece aluminum casting, the crankshaft being installed through the flywheel end. According to Mr. Richard S. Woods, Elkins Park, Penna., automobile motor authority, this was an outstanding motor comparing favorably with Parker's "T" head Mercer engine in performance, but having the advantage of being quieter and requiring less overhauling after severe punishment than the Mercer, really because of its more correct engineering.

A MISTAKE IN THE CATALOGUE.

Continued from Page 10.

wanted it - he had plenty of strength, but he preferred to use his brains.

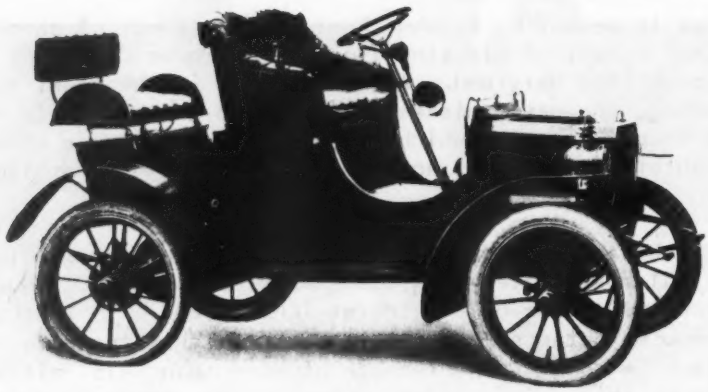
There was no provision made on this engine to let off part of the compression in starting, and on this account it was a particularly hard engine to crank. Over the inlet valve was a composition bonnet, and in the top of it, directly in line with the top of the valve stem, was a hole of about three-sixteenths of an inch in diameter. Into this he introduced the nail, and by pressing down held the valve off the seat. This, of course, prevented all compression and allowed the motor to be easily turned.

After turning the flywheel up to a high speed he pulled out the nail, and off she went.

The expert was satisfied, but the owner was not. The latter flushed up a bit, said nothing, but hunted around and produced the catalogue, turned to the page where it said it was not necessary to start this particular motor by cranking, and reading the article out loud, he ended by saying: "I want to see you start it that way."

The answer was a staggerer: "Dat's vare de catalogue vas wrong; you candt stardt her

(CONTINUED ON PAGE 23)



FOUR PASSENGER 1907 REO RUNABOUT.

1907 Reo Models.

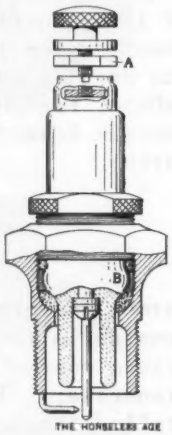
The Reo Motor Car Company, Lansing, Mich., are placing on the market for 1907 a small single cylinder runabout and a double opposed touring car. The general features of these machines are the same as in their previous models. The runabout is fitted with a new folding rear seat, as shown in the accompanying photograph. This seat will carry two comfortably, and when not in use folds into a space which when the seat is open forms the foot room for the occupants. The frame is of angle steel and rests on semi-elliptic springs at the front and full elliptic at the rear. Tubular axles fitted with roller bearings are used at the front and rear, and the machine is equipped with 28 inch wheels with 3 inch tires. The wheel base is 78 inches. The car is provided with a single cylinder, 4¾x6 inch motor, rated at 8 horse power. The valves are mechanically operated, and a special Reo float feed carburetor is used. Ignition is by jump spark from dry cells; the engine speeds are controlled by a foot throttle and a rocker shaft on the steering column. A two speed and reverse planetary gear fitted with a multiple disc clutch is used. The engine is water jacketed, the circulation being maintained by a positive gear pump. Lubrication is by means of a gravity feed; the usual type of irreversible worm and sector steering gear is employed.

The touring car for 1907 is shown in the accompanying photograph. All of the essential features of the previous models have been retained. The tonneau, which is 2 inches wider and 3 inches longer than that in previous models, is of the side entrance detachable type; the frame is pressed steel; the front tubular axle, roller bearings and spring arrangement are practically the same as in the smaller car. The wheel base is 94 inches, which is 6 inches longer than in the 1906 model. The double opposed motor is 4¾x6 inches, and rated at 16-20 horse power. Three brakes are provided, two being of the rear hub type and the third acts on the central sprocket. The car complete weighs 1,850 pounds.

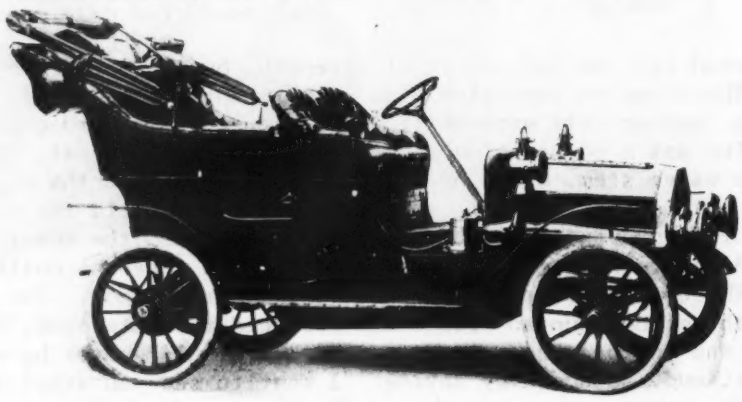
The horse power of the engine has been increased, and also the size of both the front and rear chain sprockets, the ratio being 12 to 42. It is claimed that these increased sprockets produce absolutely quiet running of the chain. The rear axle construction has been altered, providing a means for incasing the chain and yet leaving it and the differential accessible. This has been accomplished by connecting the two parts of the rear axle housing by solid brackets and fitting around these a neat pressed steel casing which completely protects the chain, rear sprocket and differential, but which can be almost instantly removed. The engine cam shaft is so supported in its bearings that it can be readily taken out without disturbing any of the adjustments on the motor. Some changes have also been made in the planetary transmission which make it more noiseless. The chassis is 2½ inches lower than in the 1906 cars, and by means of a new curved metal dash 1½ inches more leg room is provided in the front. An entirely new design, which is somewhat longer than in the former models, has been adopted for the hood. The steering gear, which is of standard type, has been slightly altered, providing a means for adjustment in case of wear. A 12 gallon gasoline tank under the hood has replaced the 9 gallon tank previously used. An oil shield has been arranged to protect the body from any splash, and a fibre apron protects the otherwise exposed under side of the engine and part of the chain. This shield is extremely light and has the advantage of never rattling, as is so often the case with metal shields. It is claimed that the lamp equipment is far superior to any car of its class on the market.

1907 Mezger Soot Proof Plug.

Several construction changes have been made in this well known plug for the coming season. These will be seen by inspection of sectional drawing. At the upper end an extra nut A has been added to lock the central spindle. All of the porcelains this year will bear the name Mezger, as the makers claim that there have been endeavors by other makers to obtain these porcelains. They have been somewhat altered in design. At point B, where previously a square shoulder was used, the form now shown in the drawing is employed. Just below this, on the tapered seat, is a winding of asbestos wicking, so that when the porcelain is forced into position the cone shaped seat makes a gas tight joint, but the parts can easily be separated. The other features of the plug which have been found satisfactory have been retained.



C. A. MEZGER SOOT PROOF SPARK PLUG.



FIVE PASSENGER REO TOURING CAR.

Winton Type XIV.

The Winton Motor Carriage Company's Type XIV, one of their two 1907 models, succeeds Model K, their 1906 car. In general design it is similar to Model K, but there are many detail changes. As regards appearance, the Type XIV has a slightly longer wheel base and is hung several inches lower; its rear springs have been brought outside the frame, and the front springs, being shackled only at the rear ends, have changed the appearance of the front end of the frame. Aprons have been added to the laminated wood fenders, insuring a cleaner car.

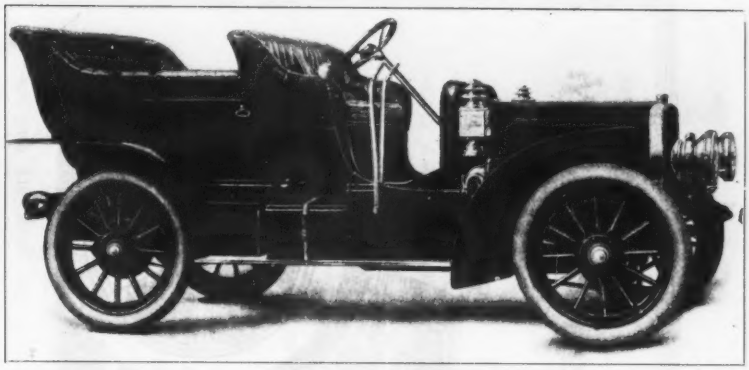
The bore of the motor has been reduced one-quarter inch, making it 4½x5 inches, and it is rated at 30 horse power. The crank shaft and cam shaft are offset to reduce thrust on cylinders and push rod guides, respectively. The vertically divided crank case is retained, as is also the system of enclosed gears, metal against rawhide, for driving cam shaft and motor accessories. The air controlled, automatic inlet valves over the exhaust are still used. Jump spark ignition with storage battery and dry cells is retained, but the plugs are located horizontally instead of being in the centre of the cylinder head, as last year. The roller contact commutator is bevel gear driven, while in Model K the drive was by spur gears, with the commutator in a horizontal position.

The concentric float type of carburetor is still used, with a large fuel tank in the rear and auxiliary tank on the dash. The rear tank has been changed from a cylindrical to a rectangular shape.

The large oil tank under the seat, feeding by air pressure to a Hill precision oiler on the dash, is still used; but a new oiling system is employed in the change gear case, whereby oil from the crank case is fed to the change gears.

A gear driven centrifugal pump is still employed to circulate cooling water; the radiator is of the vertical tube type and consists of eighty-six three-eighth inch tubes. The same type of fan gear, driven through a friction clutch, is employed as on Model K; it has been changed from plain to ball bearings, however.

Individual clutch change speed gear is still employed, with the same system of bell crank and hand lever control.



WINTON TYPE XIV.

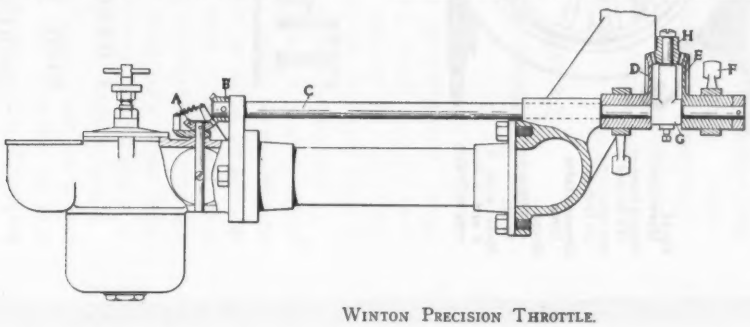
Lowering the body and motor has brought the driving shaft horizontal. The same type of universal joints are used as in 1906. The rear axle is ball bearing throughout, and the bevel gear reduction has been changed from 3.2 to 1, to 3.5 to 1. A bevel gear differential is used in place of the spur gear employed last year. Radius rods pivoted at both ends extend from the axle housing to the side members of the frame. A torsion rod is used, running from the driving gear case to a cross member of the frame, and its front end acts on two springs in a vertical cylinder. The I section Lemoine type front axle is retained, but it is a steel forging instead of the manganese bronze casting used in Model K. The pivots are roller instead of ball bearing. All four wheels run on ball bearings instead of the Timken bearings used this season. The same wheel diameter, 34 inches, is retained.

The frame is of pressed steel and the motor and change gear are supported on drop cross members, as in 1906. Winton twin springs are still used, but the front springs are double only in the rear, the forward part being of the ordinary semi-elliptic style. The front springs are seven leaf, 39½x1¾ inches; rear springs, ten leaf, 51¼x2 inches.

The screw and nut steering mechanism is retained, but its bearing surface has been increased; it has been made quicker acting; the turning radius is shorter, in spite of the increase from 102 to 104 inch wheel base.

The transmission brake has been abandoned and both internal and external brakes are now on the rear hubs. Both sets are fully equalized. Spark and throttle control levers move over stationary sectors above the wheel, and a spring returned pedal for throttle control is also used. Two hand levers and a single pedal control speed changing and brakes, the same as in former models.

It should be remarked that there is not a single brazed joint in the entire construction. The body is a five passenger, side entrance tonneau, fitted with a foot rest in the tonneau, built of laminated wood. The dash is mahogany, with sheet steel guard, and the bonnet is aluminum. The dust pan is detachable and is covered with heavy canvas, as in Model K.

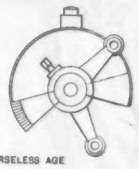


WINTON PRECISION THROTTLE.

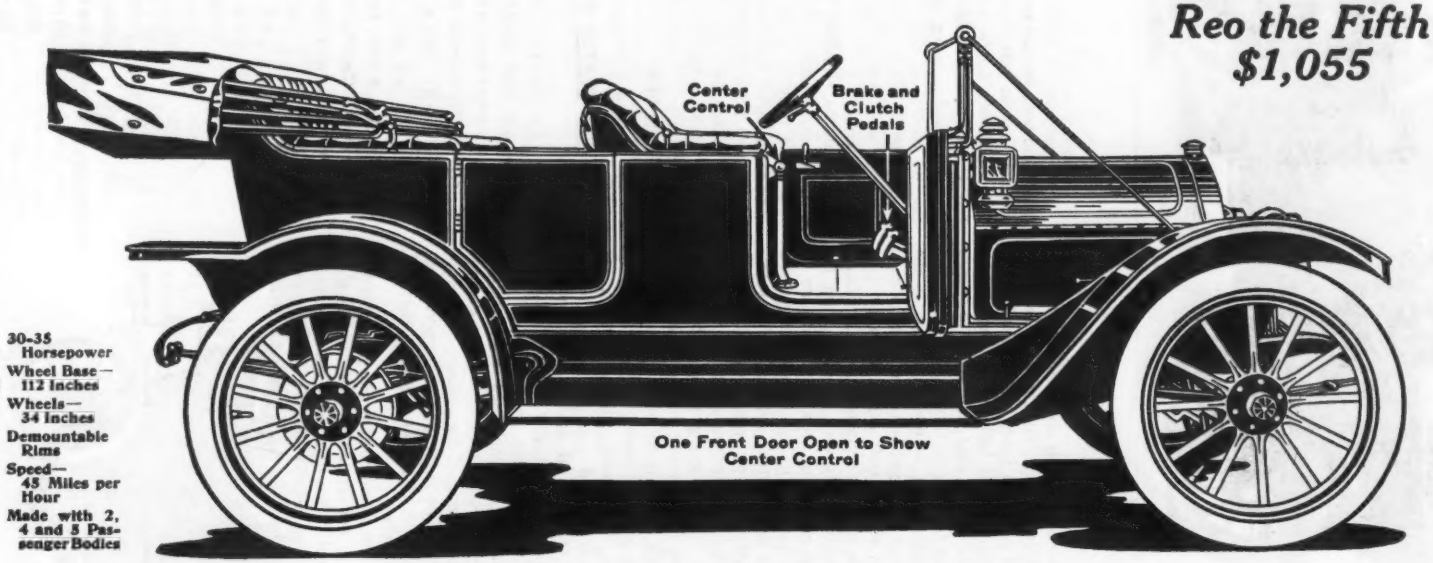
OUR CENTER PAGES.

On the center pages of this issue of THE GAZETTE you will find a reprint of Mr. Ransom E. Olds' famous advertisement of the year 1912.

In this ad Mr. Olds told the World that here was his "Farwell Car", because, said he, "I cannot build a better car", and claimed that model to be "close to finality". We wonder what Mr. Olds thinks about it now. Maybe he will tell us. (Mr. Olds is an Honorary Life Member of The Horseless Carriage Club.)



THE HORSELESS AGE



Top and windshield not included in price. We equip this car with mohair top, side curtains and slip-cover, windshield, gas tank and speedometer—all for $100 extra. **Self-starter, if wanted, $25 extra.**

The Car That Marks My Limit

By R. E. Olds, Designer

I have no quarrel with men who ask more for their cars---none with men who ask less. I have only to say that, after 25 years---after creating 24 models and building tens of thousands of cars---*here's the best I know.* I call it My Farewell Car.

innovation. The time is past for ...iads of owners have taught me ... wheels are large, the car is over- ... This initial price of $1,055 is the

best I know. **I call it My Farewell Car.**

innovation. The time is past for that.

Thousands of good men, for two decades, have worked at perfecting cars. No man can ever go much further than the best these men have done.

I believe that Reo the Fifth, in every feature, shows the utmost these men have accomplished. It represents, in addition, the best I have learned through 25 years of continuous striving. So it comes, I believe, pretty close to finality.

It shows what can be done by modern facilities, by boundless experience, by honesty of purpose, by the genius for taking pains. And that is all that any car at any price can offer.

The Lessons of 25 Years

Where this car excels lies in what I have learned in 25 years of car building.

I've been learning longer than others. I have learned faster than others, because I had more cars out.

That's my chief advantage.

What some think right, I know to be wrong. What some think sufficient, I know to be reckless.

iads of owners have taught me every possible weakness. They have shown the need for big margins of safety, for exactness, for careful inspection, for laboratory tests.

I Go to Extremes

For every part I know the best steel alloy. To make sure that I get it, I **analyze all my steel.**

I built a crushing machine of 50 tons' capacity just to test my gears.

My axles have twice the needed strength. My bearings are Timken Roller and Hyatt High Duty.

My carburetor is **doubly** heated, and adapted to low-grade gasoline. That makes the commonest troubles impossible.

I carry tests and inspections, throughout the construction, to what men call extremes. Those 25 years taught me the need for precautions.

They also have taught me that men love beautiful cars. My bodies are finished with 17 coats. My lamps are enameled —my engine nickel trimmed.

The upholstering is deep, and of hair-filled genuine leather.

wheels are large, the car is overtired. I avoid all the petty economies.

New Center Control

The gear shifting is done by that center "cane handle." It moves only three inches in each of four directions to change to every speed and reverse.

There are no side levers. Both of the brakes, also the clutch, are operated by the foot pedals. The doors are free from obstructions.

The driver may sit—as he should sit—on the left hand side, close to the cars which he passes. With the old lever control this was impossible, save in electric cars.

Price, $1,055 the Only Sensation

My greatest achievement, in my estimation, is the price on this new car. No other car begins to compete with it.

This is due to automatic machinery—to enormous production—to making all parts in one factory. It is due to building only one chassis in all this great plant. It is due to small selling cost, and to a very small profit.

This initial price of $1,055 is the minimum. It is based on today's low cost for materials. It is figured on a doubled output, due to this new creation.

If costs advance our price must advance. But we shall keep it this low just as long as is possible. That is better, we think, than fixing the price for six months in advance, and leaving big margin to do it.

My Supreme Effort

Reo the Fifth marks my limit. Better materials are impossible, better workmanship out of the question. Better features or devices, if they exist, are still unknown to me.

More care or skill or quality is beyond my capability. At twice the price I could build no better car. If others can, they are better men than I.

Ask for Catalog

Ask for our catalog, showing the various bodies and stating all the facts. We will tell you then where to see the car.

Reo the Fifth, my finest creation, will interest every motor car lover. Ask for the book today. Address

R. M. Owen & Co. General Sales Agents for **Reo Motor Car Co., Lansing, Mich.**

Canadian Factory: St. Catharines, Ontario

THOMAS B. DEWHURST DIES.

It is with regret that we announce the passing of Honorary Life Member Thomas B. Dewhurst of Lexington, Kentucky. Mr. Dewhurst died Feb. 10th 1946, age 76 years.

Mr. Dewhurst was an old time automobile man. He owned the first automobile to be used in the State of Kentucky, and was the first automobile dealer in that State, representing the Oldsmobile in 1902. Mr, Dewhurst also constructed an automobile of his own design, which he named the "Dewabout". In this work he was assisted by Mr. Louis Combs, then 15 years of age, now a Director in The Horseless Carriage Club.

CARS WANTED BY D. CAMERON PECK.

Following is a list of cars wanted by Mr. D. Cameron Peck, 140 W. Ontario St., Chicago, Illinois. COMPOUND: ADAMS-FARWELL: EARLY FINE CAR, STANDING CANOPY TOP: BREWSTER VICTORIA BODY OR FINE CAR CHASSIS OF ABOUT 1910: NON-CONDENSING STANLEY ROADSTER: PRE-1912 RACE CAR: OWEN MAGNETIC: 8 CYLINDER STEARNS KNIGHT: DUPONT SPEEDSTER: 12 CYLINDER LINCOLN (LATE TYPE): 12 CYLINDER DAIMLER: GOLDEN BUGATTI OR TYPE 57: AUSTRO-DAIMLER: 12 CYLINDER HISPANIO: and especially a 1904 "STANDARD" TOURING CAR such as is pictured and described below and on page 21.

The 1904 "Standard" Touring Car.

By Harry E. Dey.

Among the new touring cars at the recent Madison Square Garden Show was the 1904 model of the Standard Motor Construction Company, formerly the United States Long Distance Automobile Company, of Jersey City, N. J. In the design of this car are embodied many features of marine construction.

THE ENGINE.

The engine is quite similar to that placed on the racing launch Standard last summer, although it has only four cylinders instead of six, and is not provided with the self starting and reversing means of the launch motor, consisting of a compressed air tank and a shifting cam shaft. The cylinders, which are of 4 inch bore by 5½ inch stroke, are cast in pairs, and the two pairs are bolted together so as to form to all appearances an integral casting. The cylinders are mounted upon light stanchions or posts, the lower ends of which are attached to the skeleton frame supporting the crank shaft bearings, and the engine has the general appearance of a marine steam engine. The frame is stiffened by cross braces. A vertical governor shaft at the forward end of the engine is driven from the crank shaft through helical gears, and the horizontal cam shaft at the left hand side of the cylinders is operated from this vertical shaft through another pair of helical gears. On this cam shaft are mounted all the cams for operating the inlet valves, exhaust valves and the make and break igniters. The crank shaft has two bearings, one at each end and one in the centre. The cylinder heads are cast integral with the cylinders. Access may be had to any of the valves by simply removing two nuts. Make and break ignition is used, the current being furnished by a Simms-Bosch magneto, which is operated from the crank shaft by a pair of spiral gears. The engine should develop 25 horse power at 1,000 revolutions per minute.

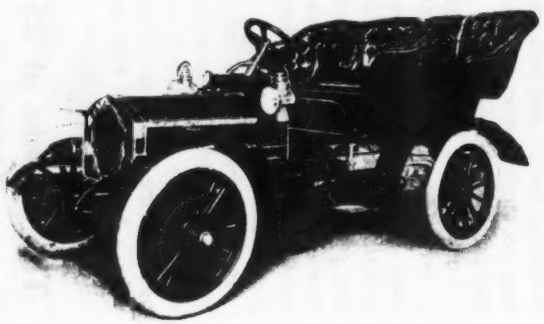
THE VAPORIZER.

The vaporizer, which is on the general float feed principle, has an entirely new arrangement for keeping the mixture uniform regardless of engine speed. There is only one air inlet, but the opening around the spraying nozzle is increased and decreased in size according to the pressure of the air, this being accomplished by a spring actuated trap door resting over the nozzle. When there is no suction this door nearly rests on the nozzle, but the suction lifts it against the force of the spring, thus enlarging the opening, and the greater the rush of air the wider the opening. The spring tension is adjustable, which affords a means of adjusting the mixture.

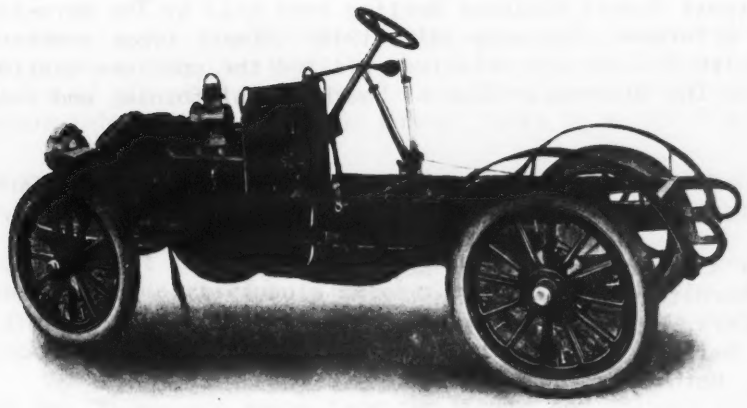
The two mechanically operated inlet valves in each casting are connected together by a port common to both, and a pipe branching into a Y form connects to a port in each of the two cylinder castings. The ball governor on the vertical shaft acts on the throttle of the vaporizer to regulate the speed of the engine. The exhaust ports connect by manifolds with easy curves to a single pipe which leads to a cylindrical muffler placed transversely in the rear.

The friction clutch is of the conical type, the cone being an aluminum casting faced with leather. The connection between the clutch and the sliding gear is made by a joint which allows free longitudinal and lateral motions. The speed change gear is of the prevailing type, giving three forward speeds and a reverse, and direct drive on the high gear. It is contained in an aluminum case with hand hole in the top. The speed change gear is interlocked with the friction clutch by means of a pin dropping into holes in the shifting rod, so it is impossible to operate the clutch until the gears are in perfect mesh. A pair of spring shoes fastened to the under frame serve to retard the clutch when it is thrown out.

To the final drive shaft outside the gear case is keyed a brake drum which is gripped by a leather faced steel band. This drum also serves as one of the yokes of the Cardan joint of the propeller shaft. A Cardan joint is only used at the forward end of the propeller shaft, and a rocking sliding joint at the rear end, the connected



The Standard Touring Car.



CHASSIS OF STANDARD TOURING CAR.

shafts being in a substantially straight line when the car is normally loaded, the engine being canted, as is usual in boat construction, to bring the crank shaft in line with the bevel pinion shaft.

The Cardan joint is of a type in which there are no pins. The cross enters the sockets loosely and is then bushed by hardened steel cap bushings, which are screwed into the yokes and locked, the yoke being undercut inside. When the bushings are in place a pocket is formed at the end which contains enough oil to lubricate the bearings for a long time. The rear axle drive is a typical bevel gear construction, the bevel gear being secured to the differential gear on the rear axle and the whole enclosed in a casing on the axle.

The cooling water is circulated by a gear pump which is direct connected to a downward extension of the vertical governor shaft. A Mercedes type cellular radiator with hexagonal tubes is used, and air is forced through this radiator by a fan mounted on ball bearings and driven by a helical spring running over grooved pulleys. This device, which the writer has also noticed on some foreign cars, should be very satisfactory, as it is not affected by moisture and always retains the same tension.

LUBRICATION.

Oiling is accomplished by a belt driven oiler mounted upon the dash. This oiler comprises a long rocking beam, having attached at each end a row of cups which dip down into the tank and are then slowly raised until the beam is nearly vertical; the cups then spill their contents into a set of hoppers, which are piped to the different parts requiring lubrication, the cups on one end of the beam emptying into a different set of hoppers than those on the other end. The oiler is operated by two sets of worm wheels, giving a double reduction, so that the complete cycle of operations is only repeated about once a minute. The capacity of the cups is, of course, very small. The bonnet has three piano hinge joints, which allows either half to be lifted up and folded without removing the bonnet. Plain bearings are used throughout except on the fan shaft and the thrust bearing for the clutch. The front axle is 1½ inches square. The wheels are of wood and are shod with 34 by 4 inch Goodrich tires. The springs are all semi-elliptic; the front ones have five leaves and are 40 inches long by 1¾ inches wide, while the rear ones have seven leaves and are 42 inches long and 1¾ inches wide. The running gear frame is of pressed steel, with a centre section of 4½ by 1½ by three-sixteenths inches thick, tapering at the ends. A sheet metal partition is placed a couple of inches behind the fan which prevents the hot, dusty air from being discharged into the engine space. A sheet metal apron completely encloses the under part of the chassis, extending from this partition back to the rear of the gear case. This, it is claimed, will keep out all dust and mud, and obviate the necessity of using a covering over the running parts of the engine.

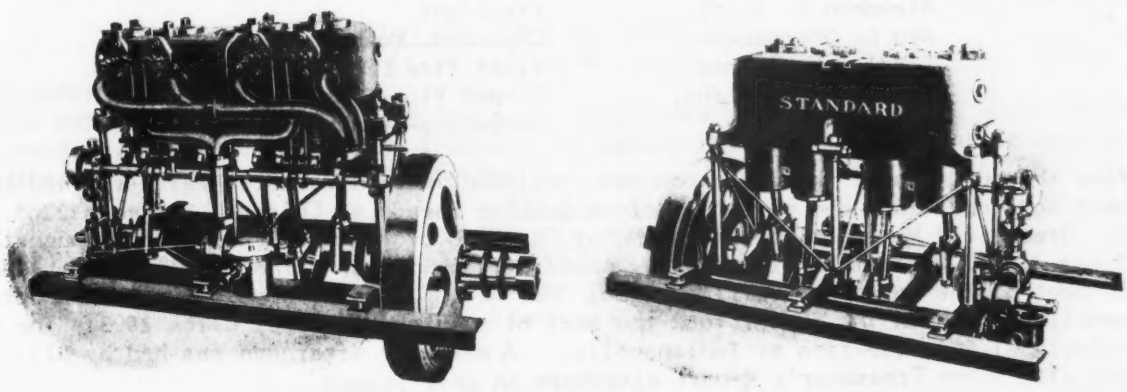
The brakes are of the external type of band with shoes, one being foot operated and the other hand operated. Steering is by a 15 inch hand wheel, which has an ignition contact push button inlaid into the under side of the rim; the steering gear is worm and sector. The controlling devices comprise two foot levers and two side hand levers, besides the spark and throttle control on the steering post. One pair of brakes act directly on the wheel hubs and are applied through a bronze cable equalizer. The body is of the King of the Belgians style and is upholstered in black leather.

The Daylight Curtain.

A. G. Eneas, of 50 Congress street, Boston, manufactures a curtain under the above name, which he claims is particularly adapted to automobiles. Each curtain contains a transparent flexible panel, strongly reinforced and securely attached to the curtain body.

The transparent panels are made of a tough, flexible, waterproof material which readily conforms to rolling without damage, and is claimed to withstand the wear and tear equally well with the curtain itself. It can be used as a sun screen or storm curtain, as desired.

These curtains in a way give a car the advantages of an all glass closed body.



TWO VIEWS OF THE STANDARD FOUR CYLINDER AUTOMOBILE ENGINE.

ANNUAL BUSINESS MEETING WELL ATTENDED.

What turned out to be the largest Annual Business Meeting ever held by The Horseless Carriage Club, was held Sunday afternoon, February 24th, 1946. Ninety-seven members attended, and these, together with friends and relatives, filled the spacious quarters provided through the kindness of The Automobile Club of Southern California, and overflowed into the hall.

The meeting was called to order at 2:15 o'clock by President George E. Shafer. During the course of the afternoon interesting talks were given by the following directors.

Membership Report and Treasurer's Report, by Herbert Royston.
Gazette Committee, by Ben L. Sharpsteen.
Introduction of Board of Directors, by W. Everett Miller.
Ways and Means, by Steadman G. Smith.
Program for 1946, by Lindley F. Bothwell.

President Shafer read the names of 20 nominees from which 15 Directors were to be elected for 1946. 6 other nominations were made from the floor, making a total of 26 nominees. Ballots were passed out, which, after being marked, were collected and turned over to the Election Board appointed by President Shafer. The result was as follows:

97 votes cast.

Herbert Royston	96	Arthur E. Twohy	59
W. Everett Miller	88	Karl Weber	48
Ben L. Sharpsteen	87	Robert Oliver	48
Lindley F. Bothwell	85	Harry Johnson	38
Tom Mathews	84	Albert Brouse	25
Louis Combs	83	Richard Teague	24
Steadman G. Smith	77	Gerald Selby	23
Alfred S. Lewerenz	76	C. Standlee Martin	23
Dr. Geo. E, Shafer	72	John McGuire	23
O. J. Smith	70	Bernard Rademaker	22
A. L. Pouleur	68	W. L. Haines	22
Clay Claberg	62	Jamison Handy, Jr.	20
Ransom Matthews	62	Seward E. Cole	12

The 15 candidates having the greatest number of votes were elected. There being a tie between Karl Weber and Robert Oliver, each having 48 votes, another vote was held for these two, Mr. Weber winning.

Following the election of Directors, Officers as follows were elected for 1946.

Steadman G. Smith,	President
Ben L. Sharpsteen,	Chairman, Board of Directors.
Lindley F. Bothwell,	First Vice President,
Alfred S. Lewerenz,	Second Vice President.
Herbert Royston,	Secretary-Treasurer.

After the business of the afternoon was concluded, motion pictures were screened by Herbert Royston. Included were the Golden Jubilee Parade at Chicago, November 22nd, 1945; Greenfield Meet of The Veteran Motor Car Club of America, (provided through the kindness of Mr. William W. Willock, Jr., Syosset, New York); The October 14th, 1945 Field Meet of The Horseless Carriage Club; Dr. Geo. E. Shafer's motorcycles and antique automobiles in which Dr. Shafer took the part of a motorcycle cop, Circa 1905; The 1939 International 500 mile race at Indianapolis. A pleasant afternoon was had by all, or almost all. (See Treasurer's Report elsewhere in this issue).

Herbert Royston . Secretary.

CLUB MEMBERS ATTEND GOLDEN JUBILEE IN CHICAGO.

(Continued from Page 7)

the stop signals which seemed to be one of the biggest thrills for the drivers. Mrs. Lohr drove a 1916 Overland Coupe and the Misses Barbara and Priscilla Lohr, skilled drivers of all of their father's antiques, each drove a horseless carriage, Miss Barbara Lohr coming in at the Museum first in a 1910 Sears Motorbuggy.

One of the ancient cars was a roller-drive Duryea built by the late Charles E. Duryea, and entered and driven by his son, M. J. Duryea, of Massachusetts,

Upon arrival at the picturesque Northwestern University Technological Institute in Evanston, the participants were greeted by a reception committee and taken on tours of the building. Lots of hot coffee and a delicious turkey sandwich box luncheon thoroughly warmed the chilled automobilists.

Of the 29 ancient autos from the Museum and private collections participating, only 4 failed to make the 50-mile tour. The Duryea pulled out several times and finally ended up in a garage along the way where it was repaired and driven back to the Museum the next day under its own power by its determined driver. The 1896 Roberts Electric, as was expected, was removed at Evanston owing to only a 25-mile radius of action, and the 1909 Brush failed to arrive at Evanston. A minor difficulty caused by a stuck valve forced Major Lohr to put his Stanley Steamer in the garage enroute, and the 1904 Cadillac, in which Dr. Shafer rode, was stalled for a short time due to a loose battery connection but was soon rolling merrily on its way.

Members of The Horseless Carriage Club from Eastern States seen at the celebration included: Mr. and Mrs. J. Frank Duryea of Madison, Conn., Mr. Charles B, King, Larchmont, N. Y., Major Lenox R. Lohr, Mr. D. Cameron Peck and Mr. Lloyd C, Partridge, all of Chicago, Ill., Mr, M. J. Duryea, Longmeadow, Mass., Mr. C, Raymond Levis, Annapolis, Md., Mr. Frederick C. Elliott, New York, N. Y., Mr. Russell Heitman, Lake Forest, Ill., Mrs. Myra H. Gynn, Cleveland, Ohio, Mr. F. R. Clouse, Auburn, Ind., and Mr. Tom McKean, Ithan, Penna.

Chicagoan Is Eyewitness of First Race.

Mrs. Henry W. Nichols of 7020 Jeffery Avenue, Chicago, Ill., a visitor in the Chicago Museum of Science and Industry, tells of being an actual eyewitness of the start of the first race in 1895. She describes the day as a very cold one and recalls about ten cars at the start and most of the trouble occurring as they went thru the viaduct.

A MISTAKE IN THE CATALOGUE.

(Continued from Page 15.)

any odder vay."

The expert went back to Philadelphia, and the owner said things which would not be printed if I repeated them. He kept the rig awhile and sold it, soon after buying another, in my opinion a much worse one.

The End.

THE DRASTIC AGE.

Gal: "Have you ever been pinched for going too fast?"

Boy: "No; but I've been slapped."

WANTED.

An ADAMS-FARWELL Car.

From Telegraph-Herald
Dubuque, Iowa. June 24, 1945.

Two nationally famous museums and hundreds of automobile collectors are trying to find one of the old Adams-Farwell automobiles, which were made in Dubuque by the Adams company between 1898 and 1907, Fred E. Bissell, Jr., a local antique car collector, told The Telegraph-Herald Saturday.

Mr. Bissell received a letter from the Chicago Museum of Science and Industry Friday, requesting assistance in finding one of the old cars for exhibition at the museum during the "Golden Jubilee celebration of the First Automobile Race to be held in America," to be staged in Chicago in November.

Only 52 Produced

The first auto race in history, according to Lenox R. Lohr, president of the museum and head of the successful Chicago Century of Progress, was run from Jackson Park to Evanston and return on Thanksgiving day, 1895. The race is to be duplicated next Thanksgiving day.

There was no Adams-Farwell car entered in the race, Mr. Lohr explained, but he stressed the importance of finding a model for the exhibition because of the fact that it is the only early American car that is not now on exhibition in an American museum.

The rarity is not surprising, for only 52 of the cars were made, according to Lester A. Demkier, superintendent of the Adams company at the present time, and an employe for many years.

All of the models were custom built and cost from $2,50 to $4,500, Mr. Demkier explained, another reason that few were ever manufactured.

Ford Wants One

The now famous car is also the subject of a search by curators of Edison Institute, Henry Ford's famous research organization at Greenfield Village, near Dearborn, Mich.

Mr. Ford has personally offered a $500 reward for assistance in securing one of the rare vehicles, and he would without doubt pay a "fancy price" to the owner, Mr. Bissell said.

In the Edison Institute collection of automobile advertising is a 1905 Adams company automobile catalog, and officers of the institute sent Mr. Bissell photostat copies of each of its pages recently.

The booklet was a masterpiece in automobile advertising, picturing five models available to purchasers at that time.

All models of the car had the engine under the rear seat and operated with chain drive.

The last one known to be in existence was owned by a sheriff in Texas about 25 years ago, Mr. Bissell said, but this car disappeared many years ago.

NEW VEHICLES AND PARTS

The Adams-Farwell for 1907.

The Adams Company, of Dubuque, Ia., will devote their entire attention to the production of a single model the coming season. This car, which they designate as Model 7-A, is almost identical in mechanical construction with their 1906 five cylinder car, which was described very fully in our issue of February 28, 1906. There are, however, quite a number of changes in details, although all of their original and unique features are retained, with the exception of the automatic spark advance.

Before describing the changes in detail it may be well to briefly review the general principles of the mechanism of this car for the benefit of those who have recently become interested in automobiles and may not be familiar with these constructions.

From comments which the writer overheard at the recent Chicago Show it is evident that many people who have a fairly good understanding of the ordinary style of engine do not comprehend the action of this revolving motor. It is usually difficult to remember that every exertion of force tends to cause movement in at least two opposite directions. Thus the discharge of a gun sends the bullet forward and pushes the gun back with equal force, but much slower, on account of its greater weight. In the same manner the explosion of gas in the cylinder of the ordinary four cylinder motor pushes the piston down and tends to raise the cylinder up. The downward movement of the piston is transformed by means of the connecting rod and crank into the rotary movement of the crank and flywheel. In order that the crank may transmit power to an external shaft, in other words, that it may turn in spite of the resistance to its motion, it must have something to react against, and this something is the stationary portion of the motor. Thus, when a large motor is started it may be noticed that one of the front springs of the car compresses, showing that the motor tends to revolve in the opposite direction to the crank. If the motor cylinders were arranged symmetrically around the axis of the crank shaft, so they would balance, and left free to revolve while the crank shaft was held stationary, they would turn as rapidly as the crank does in the ordinary construction.

This is exactly what the Adams Company have done in their special type of engine. They employ a stationary vertical crank shaft, with a single crank pin; around this, in a horizontal plane, revolve five cylinders

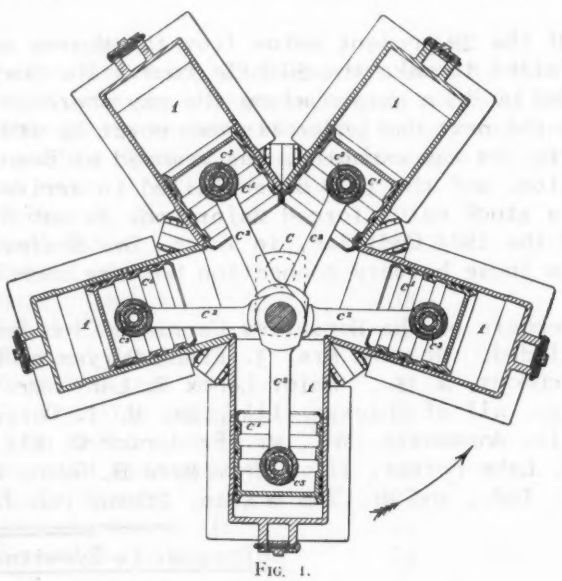


FIG. 1.

of 5 inch bore, set radially and equally spaced, like the spokes of a wheel. As the crank pin is 2½ inches off centre from the shaft which forms the centre of revolution of the cylinders, the stroke is 5 inches. The motor is rated at 40-45 horse power.

This type of motor was adopted for several reasons; first, to facilitate air cooling by causing the air to pass along fins lengthwise of the cylinders; second, to secure good balance with few parts; third, to reduce weight by making the crank case small and having the cylinder unit act as the flywheel.

Centrifugal force plays an important part in the action of this motor, but a full consideration of its effects is far beyond the scope of this article. It should be noted, however, that as the pistons revolve around a common fixed centre, the crank pin, they have no reciprocating motion with relation to the stationary parts of the car, and hence cause no vibration. The practically constant centrifugal force, due to their weight, acts in the opposite direction from the gas pressure, and diminishes the wear on the crank pin and the wristpins by just that

(CONTINUED ON PAGE 26.)

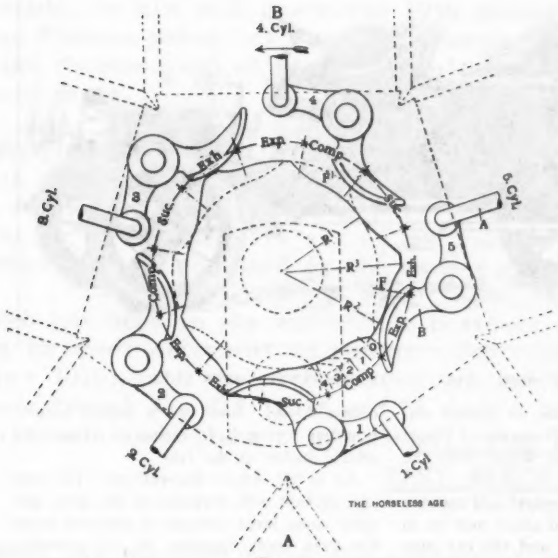
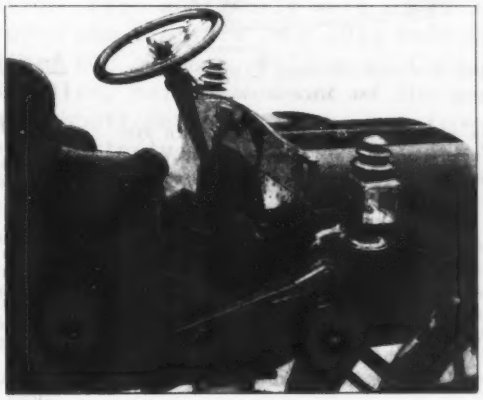


FIG. 2.

much. The engine works on the four cycle principle, and if we number the cylinders consecutively in the opposite direction to rotation, each alternate cylinder is ignited in the order 1, 3, 5, 2, 4, 1.

Power is transmitted to the rear axle as follows: The motor is mounted on the top of a bronze case which contains the change gears. A bevel pinion secured to its revolving element meshes with a bevel gear in the case. The change gear gives four forward speeds and a reverse on the selective sliding system, and uses two clutches, one for the second and fourth speeds, and the other for the first, third and reverse. Its forward shaft is connected with the rear axle by a large chain well over toward the right side.

The Adams Company believe they were the first to put both valves in the head and operate them by a single lever. As their method differs somewhat from that in common use it may be well to describe it. The valves are placed in cages screwed into the cylinders, with their stems parallel, the inlet being above and the exhaust below, with a rocker arm pivoted between them. To the lower end of the rocker arm is connected an operating rod A (see Fig. 2). The inner end of A is connected to bell crank B, whose shoe is wide enough to make contact with two cams, one above the other. These cams are revolved by gearing in the same direction as the motor, but slightly slower. The upper cam is made up of three radii, R^1, R^2 and R^3. When the bell crank rests on R^2 both valves are closed; when it is raised upon R^3 the exhaust valve is forced open against the tension of its light spring and the centrifugal force due to its own weight. When the radius R^1 comes under a shoe the centrifugal force due to the weight of A and to the unbalanced portion of the valve rocker arm, aided by the pull of a light spring on A, forces B against the cam and opens the inlet valve. The engine is throttled by holding the inlet valve open on the compression stroke, and allowing a part of the charge to return into the distributing chamber and pass to the next sucking cylinder. Thus, with the cams as shown, we get a full charge and a compression of nearly 90 pounds absolute; with the cam in position 3, 2, 1, 0 (see Fig. 2) we get less and less charge, and, of course, this reduces the compression.



ADAMS-FARWELL CONTROL.

The gasoline supply to the carburetor remains the same as in 1906, consisting of a plunger pump feeding into a constant level gasoline well fitted with an overflow pipe. The carburetor, however, is somewhat changed. The gasoline passage has been shortened and is restricted only at one point, which is at the lower end of the needle valve. The nozzle has been extended directly into the distributing chamber, and its end curved downward in the direction of the gas flow. The hinged air shutter is no longer connected to the needle valve, but is controlled by a spring whose tension is adjusted by the position of a block on an arc in the air passage. The opening of the needle valve may be regulated from the driver's seat.

With the exception of the timer the ignition equipment is the same as last year. It consists of a storage battery, a single

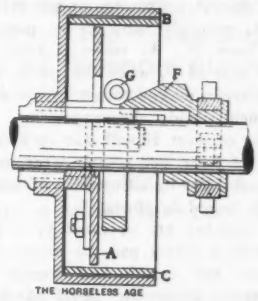


FIG. 6.

coil with a distributer working from a stationary insulated segment to an insulated screw on each of the revolving cylinders, and the timer just mentioned. The timer formerly used automatically regulated the time of the spark and the length of the contact to conform with the speed of the engine. It has been found, however, that very little spark regulation is required with variable compression control, and the simple timer shown in Fig. 4 has been designed. It consists of a bronze case A, in which is a revolving arm B; on two studs projecting from this arm are hardened steel rollers C C, which make contact with the heavy spring D; D also is hardened at the point of contact. It is set in a cylindrical block of fibre E. The length of the contact may be regulated by adjusting tangent screws F and G. A single primary wire leads from the timer to the battery. The change gear is practically the same as last year, with the exception of the clutches and their operation. The gears are cut from solid discs of chrome nickel steel,

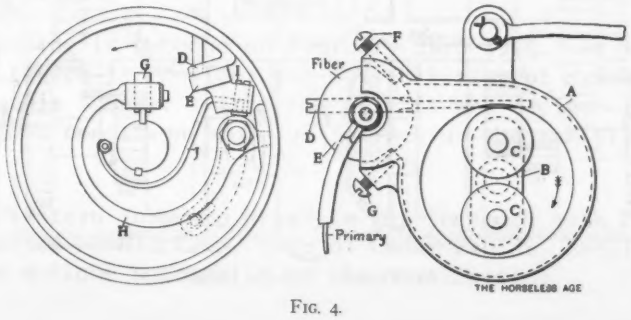


FIG. 4.

and the shafts are made of the same material. The main shaft is mounted on Hess-Bright bearings at the ends and Timken rollers in the middle. The secondary shaft runs on three H.-B. bearings. The spherical metal-to-metal brake in the change gear case is retained.

While the two clutches operate on the same principle as in last year's model, their construction has been simplified. Instead of clamping a split ring between a drum and an expanding band, the band is fastened to the driving member, and expands against the drum. In Fig. 6 A is a disc keyed to the driving shaft; B is a bronze drum connected to the gears to be driven; C is a high carbon steel band, whose end D abuts against lug E, which is a part of the disc A. Forcing wedge F under roller G expands band C by means of spring lever H. As roller G rests upon the flat part of F, when the clutch is engaged there is no end thrust, except during engagement and disengagement. The springing of lever H will take up a certain amount of wear, but greater wear may be compensated for by adjustment of screw I, which is locked by spring J.

Both clutches are operated by a single pedal with a tilting pad, by means of an ingenious bell crank and toggle joint mechanism. When the pedal shown in Fig. 7 is pushed forward it releases both clutches.

Rocking pad A rotates rod B, and throws the arm G and lever C out of line to one side or the other. Suppose the toe of A to be depressed, C is rotated slightly to the right, and if the pedal is let back the rotation of lever C, of its shaft D and of the levers and bell cranks at its rear end is continued to the right. The mechanism assumes the position shown by the dotted lines, and the second and fourth speed clutch is engaged. This clutch is connected to lever E. If the pedal is pushed forward the heel of pad A is depressed and the pedal is allowed to return, the clutch for the first, third and reverse speeds is engaged. Each set of gears is interlocked with its clutch and cannot be shifted unless the clutch is fully disengaged. Short levers under the steering wheel slide the gears.

By using this system, second and reverse, or third and fourth speed gears may be in mesh at the same time, and the car may be operated on the individual clutch system for quick work, such as manœuvering in a crowded street or when ascending hills.

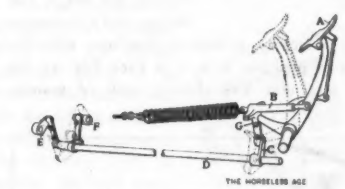
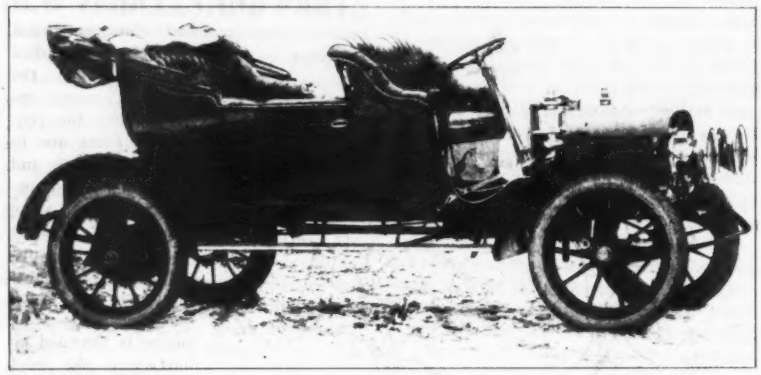


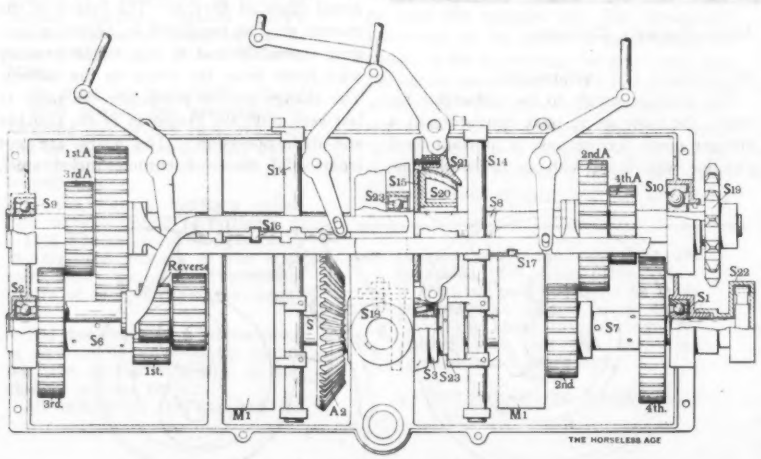
FIG. 7.—ADAMS-FARWELL CLUTCH OPERATING MECHANISM.

In general appearance the car greatly resembles last year's model, but it has considerably more room in the tonneau, as the wheel base has been increased from 108 to 120 inches. The wheeels are 2 inches larger in diameter, making them now 36 by 3½ inches. Semi-elliptic springs are employed on front and rear, as on the preceding model; they are 4 inches longer, however, being 44x2 inches in front and 48x2½ inches at the rear.

As in all Adams-Farwell cars the rear seat is kept well forward of the axle, and their usual large amount of carrying space for tires, tools, luggage, etc., is provided. The car has an unusually large road clearance, and is especially designed for use on rough roads and in a hilly country. The makers claim that it will climb any hill on its second speed that any stock touring car can climb on its first speed.



ADAMS-FARWELL FORTY-FORTY-FIVE HORSE POWER CAR.



ADAMS-FARWELL CHANGE GEAR.

WANTED.

An ADAMS-FARWELL Car.

(CONTINUED FROM PAGE 24.)

Waldo Adams, son of Eugene Adams, president of the Adams company, saw one of the cars in operation on the streets of Chicago in 1920, but company officials have never been successful in finding the owner.

The inventor of the car was F. O. Farwell, superintendent of the Adams company plant until 1921. He died about three years ago in Toledo, Ohio, after making a fortune from royalties of a phonograph invention which was purchased by the Victor Talking Machine company.

He demonstrated his inventive versatility by perfecting a unique type of merry-go-round which is still used by carnival companies.

Three-Cylinder Engine

The engine was unique because it had three cylinders and the motor revolved around a stationary shaft, the gear used to drive the wheels being connected to the outside of the engine. Later models of the car had five cylinders that operated on the same principle.

All parts of the car were made in the Adams plant, with the exception of a few of the bodies, which were produced at the Connolly Carriage company factory, which was located at Seventh and Iowa streets, site of the present Stampfer farm store.

(CONTINUED ON PAGE 30)

THE GAZETTE'S COVER.

Pictured on the cover of this issue is Bob Busby, of Pomona, California, and Miami, Florida, in his well preserved 1910 Mercer Raceabout. With Bob is his "mechanic" Miss Frances Baker, of Pomona. Frances sees to it that there is no lack of sandwiches, fried chicken, and all the trimmin's for Bob and friends at Horseless Carriage Club Field Meets.

Four years ago Bob drove this Mercer from Miami to Los Angeles in eight days. He lost one day in Texas on account of rain. No night driving. The car was one of a trio of racers originally used on dirt ovals back in 1911, 1912, and 1913. It can still make some of the modern cars sit up and take notice when it meets them on the highways. The number "12" on the hood is the number used on the car in the early races.

Bob has been in the automobile business for many years. At present he is specializing in wheel alignment in Pomona. Bob claims that he didn't miss a Florida hurricane since 1910, with the exception of the one in September 1945. He missed that one because travel was difficult and he didn't think the trip necessary. Bob likes Southern California so well he thinks he will stay here. (Miami Chamber of Commerce please note).

EAST MEETS WEST IN IOWA.

By P. Yohe Veile, Jr., Society Editor.

What may turn out to be the nucleus of an Iowa Regional Group of the HCC was a meeting of certain of our members on November 11th, 1945, at Montecello, a whistle-stop on the plains of Iowa, midway between Dubuque and Cedar Rapids.

Fred and Dick Bissell managed to reach Montecello in spite of almost impassable roads, and temperature below zero. Fred and family were in Fred's imaculate 1923 Buick Sport Roadster, while Dick braved the elements in a 1913 Ford touring. On arrival at Montecello they found two other HCC members, William G. Cain, Jr., and Luther S. Watson, of Cedar Rapids, with families, parked in front of the general store. Lute Watson had managed to pilot his 1912 Abbott-Detroit all the way from Cedar Rapids, while Bill Cain, who started out with his 1916 twelve-cylinder Pathfinder Sport Touring arrived in a late model Buick Convertible, the Pathfinder having lost the path, and some of its innards, somewhere along the route.

After much hilarious greeting Fred broke the ice in the horse-trough, so that little Johnnie Bissell could sail his toy boat, and the rest of the group adjourned to a small but warm cafe for an excellent meal and other refreshments. They were entertained from time to time by local youth worrying bulb horns on the antiques outside. Various articles of automobiliana were passed around for examination, while experiences and anecdotes were exchanged.

Later the group toured the city to find two old cars reported stored there. The only desirable one was not for sale. However, a rich cache of ancient car parts and accessories was discovered in the garage of Mr. Matheson, the Chevrolet dealer, and the rest of the day was spent in selecting rare items. The meeting was declared by all to have been a huge success.

The above group enjoyed another meeting in Dubuque on February 23rd 1946. At this meeting Fred Bissell's IHC "30" was tested to consider the possibilities of driving this car to the Ford Conclave in Detroit this Summer. After the test it was decided that the best thing to do to put the car in good condition would be to jack up the radiator cap and run another car under.

Antique automobile enthusiasts in eastern Iowa are urged to get in touch with Fred or Dick Bissell, of Dubuque, or Lute Watson or Bill Cain, Jr., of Cedar Rapids. Requisite; drive, tow, push or somehow bring an antique automobile to the next meeting.

A MESSAGE FROM OUR NEW PRESIDENT.

(CONTINUED FROM PAGE 3)

Specifically during the past few months your Board of Directors has given attention to a complete revision, or redrafting of the Club's By-Laws which were prepared and which were appropriate for conditions which existed some seven or eight years ago. As you can all see the Gazette has continued to improve in spite of the fact that materials and workmanship were difficult to obtain during the past few years. We feel that those members residing outside the district community known as Southern California, will be interested in knowing that this improvement will continue and will receive the active sponsorship of all those interested in the Club. The meets at which old cars and other automobilania are exhibited will also be revived in all their former glory and will be improved in any way possible. The Board of Directors has decided upon four standing committees which should serve each year. This list will be augmented and to it will be added such special committees as may seem appropriate.

On behalf of all those who have been active in the Club may I say that we look forward to a fine year for 1946. If there are any of you who wish to work for the best interests of this Club and will be able to give it any of your time, please give your name, address and telephone number to any official of the Club, or member of the Board of Directors and we will see that you are put to work. In this way all will have an opportunity to be active in our organization and to become acquainted with those who are likewise interested in our hobby.

Yours for a better and bigger Club.

STEADMAN G. SMITH. *PRESIDENT.*

TREASURER'S REPORT FOR THE YEAR 1945.

Statement of Receipts and Disbursements for the Calendar year of 1945.

Cash in Bank, Jan. 1st, 1945		$476.85
Receipts.		
Dues from members	$910.08	
Sale of Club Emblems	91.50	
Sale of Gazettes	61.00	
Sale of other publications	77.25	
Advertising in Gazette	17.00	1156.83
		$1633.68
Disbursements.		
Registrar (Position discontinued).	5.00	
Mailing expenses.	12.50	
Postoffice box rent	4.66	
Varityper, express and supplies,	399.92	
American Med. Ass'n Journal reprints	150.00	
Express on AMA Journal reprints	14.21	
Cost of other publications	51.04	
Stationery and Printing	78.42	
Postage	61.66	
Addressing machine and supplies	43.97	
Printing Gazette (3 issues).	188.91	
Editing and typing Gazette	121.89	
Typing and printing membership list	22.03	
Miscellaneous Expenses	23.59	1177.80
Cash in Bank, Jan. 1st, 1946.		$455.88

To Whom It May Concern - The above is a true and correct statement of the Receipts and Disbursements of The Horseless Carriage Club for the calendar year of 1945, as per bank statements, vouchers, and other records in my possession.

HERBERT ROYSTON, *TREASURER.*

ST. LOUIS REGIONAL GROUP ENJOYS INTERESTING MEETING.

BY WAYNE BLEDSOE.

The St. Louis Regional Group of The Horseless Carriage Club met at the plant of Honorary Life Member Mr. George P. Dorris, at 6108 Clemens Ave., St. Louis, Mo., on the afternoon of Sunday October 16th, 1945. In spite of inclement weather many members attended. Among those present were A. H. Deeken, Director, Frank Steward, Assistant Director, Wayne Bledsoe, Secretary, George P. Dorris, James Carpenter, Julian Nance, Mr. Kellogg, Mr. Moore, Gil Murphy, Mr. Von Behren, Mr. Neat, C. B. Snyder, Herbert Restetsky, Roger Kennedy, and Mr. A. L. Dyke, former manufacturer of the Dyke car and publisher of the famous Dyke's Encyclopedia on Automobiles.

Mr. Dorris started the engine in the 1902 "St. Louis" car, Boston Model which he is rebuilding. Mr. Dorris manufactured this make car in the early days of automobiles. The one cylinder engine started readily and ran well. Mr. Dorris is to be complimented for his fine work in rebuilding this car. Body work is now being done, prior to painting and upholstering. Mr. Dorris expects to have the car in showroom condition when he has finished.

Mr. Dyke had a brief-case full of old catalogues, literature and parts manuals of the 1902 and 1903 "St. Louis" cars. Also a copy of his 1903 Encyclopedia giving full information on all old cars built at that time including his own "Dyke" cars. As far as can be ascertained, the first American made carburetor placed on the market was the Dyke float-feed carburetor manufactured by A. L. Dyke and George P. Dorris. Prior to the introduction of this device all so called "carburetors" or "carbureters" manufactured in American were not equipped to automatically discontinue the flow of gasoline when the engine was stopped. It was necessary for the operator to close the needle valve manually in order to prevent continuation of gasoline flow, and to adjust this valve according to the varying fuel demand of the engine. This float-feed or constant level type carburetor was introduced to relieve the operator of the necessity of manipulating the needle-valve. This carburetor is preserved and exhibited in the Smithsonian Institute National Museum, Washington, D. C.

LOCOMOBILE AND PIERCE ARROW QUALITY.

CONTINUED FROM PAGE 9.

getaway, ran here up to about 30 in third and then into high. Steering was also very easy and tireless, no vibration or road shocks being felt, and I have put many thousands of miles on present day Fords and Chevrolets and have found that the ever present battle to hold these lighter cars on the road is far more tiring after a days continuous driving than the operation of their heavy and bulky predecessors. You could really lay back in the drivers seat of a Pierce or Locomobile and let it roll. They held the road without effort and responded immediately to the steering wheel. While a Locomobile factory man, I have always preferred right hand drive and I believe that it is a fact today that anyone who has driven a right hand drive job for any length of time, still prefers the right side drive. Pierce used it until the middle 20s, as did the four cylinder Stutz and F W D truck. Locomobile changed to left side drive in 1914.

Both Pierce and Locomobile were leaders in inovations and improvements so far in advance of other makes that they discarded them in some instances before other manufacturers took them up. Headlamps on the fenders are now the accepted practice in the automobile industry, Pierce Arrow introduced them in 1914, thirty-one years ago. Steering wheel gear shifts are also universally accepted, Pierce Arrow introduced this device in 1906 and used it for three years, then returned to the conventional gear shift lever. A chassis lubrication system from a central source of supply was pioneered by Locomobile in 1912, many years before other American manufacturers used this device. Locomobile was also a pioneer in the use of the full-floating rear axle. Both used Adams and Westlake lamps for years. These were the product of this quality railroad lamp manufacturer and were especially designed for both cars. These lamps were beautifully fashioned units and not just reflectors submerged in sheet metal.

Years of experience with all types of gasoline engines has more than ever convinced the writer of the supremacy of the big bore T head engine design. Nothing has ever approached the mechanical symmetry and balance of a T head motor and the size of the valves is not limited in any way. These motors would deliver at slow engine speed the power that present day motors must be wound up to the high RPM brackets to deliver. Locomobile and Pierce Arrow were foremost in the design and development of T head motors. There were other beautiful T head jobs such as the Packard 30, 4 cylinder Mercer, the White of 1913, that was later adapted to American LaFrance fire apparatus, the Thomas with its cylinders cast separately, the 16 valve White, and the four cylinder Wisconsin used by Stutz, National and F W D trucks. In closing a few words of tribute must be paid to the 24 valve Pierce Arrow developed in late 1916. In my humble opinion this was the smoothest and most responsive automobile that ever rolled off a factory floor. A touch of the throttle and this car would move! It moved fast and quietly and its motor promised long life and freedom from repair. There is no question in my mind, after seeing the tremendous changes in automobile manufacturing take place, that the old quality cars will remain forever as the finest mechanical examples of the American automobile industry.

WANTED, AN ADAMS-FARWELL CAR.

(CONTINUED FROM PAGE 26).

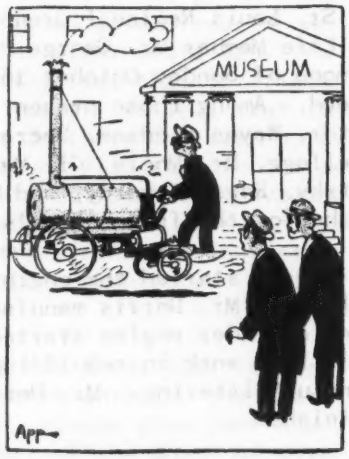
After discontinuance of automobile production in 1907, the Farwell motor was developed for use in airplanes, and many successful flights were made with planes powered with these unique power units, but the engines never went into production.

During World War 1 two French planes were used which had motors that infringed on Adams-Farwell patents, but due to the fact that the motors were used in the prosecution of the war against Germany, no suits were ever filed by the company.

In the opinion of Mr. Bissell, best known authority on early automobiles in this part of the country, it will never be possible to find one of the cars, which has become as "extinct as the passenger pigeon." The person who does find one, however, will be able to exhibit Henry Ford's personal check for $500.00.

(Editor's Note: As we go to press we hear rumors that Mr. Bissell has found an Adams-Farwell, but is having trouble in getting it away from the present owner. If this bit of information is true we congratulate Mr Bissell. When he gets that check from Mr. Ford he can have it framed - Henry wouldn't care).

The End.



"Yes, the curator goes home on it every night—he says it's better than hanging about for buses."

(NO APOLOGIES TO RANSOM MATTHEWS. HE SHOULDN'T HAVE SOLD HIS CAR.)

OUR NEW MEMBERS.

Robert Mowry, 1617 Arlington, Apt. 2, Torrance, California. Owns 1915 Dodge.

Fred W. Buess, Jr., 331 West Doran St., Glendale, California.

Marc Edsel Miller, 5415 El Verano Ave., Los Angeles 41, California. Son of W. Everett Miller.

Peter G. Fryer, Cedar St., Bloomington, California. Mechanical Engineer.

G. A. Beer, 623 South Hope Street, Los Angeles 14, California. Investment Securities. Interested in Literature, Emblems, Lamps, Radiator Ornaments, Horns, and Pictures. Wants to secure an antique automobile.

James Austin, Jr. 5904 Julian Ave., St. Louis, Mo. Connected with automobile business for many years. Interested in Literature and Pictures.

Mrs. Ruth E. Swihart, E. 30th and Chester Ave., Cleveland, Ohio. Curator of Thompson Products Auto Album, taking the position of Mrs. Myra J. Gynn who has moved to Hawaii.

J. R. Williams, 623 South Hope Street, Los Angeles 14, California. Investment Securities. Interested in all makes of antique automobiles. Wants to secure one.

OUR NEW MEMBERS.

Thomas McKean, Parks Run Lane, Ithan, Penna. Vice-President and Librarian, Belcourt Museum, Newport, R. I. Life Membership. Owns Pierce 1902, Ford Touring 1905, Cadillac Rear-entrance Touring 1904, Ford Roadster 1907, Mercedes 1905, Reo Touring 1907, Franklin Touring 1909, Packard "30" Limousine 1911, Packard Touring 1915, Stoddard-Dayton Roadster 1907, Stoddard-Dayton Chassis 1910, Chevrolet Roadster 1914, Renault Victoria 1911, Rolls-Royce Coupe 1912, Stutz Bearcat 1914, and others. Interested in Literature, Lamps, Horns and Pictures.

Waldo Wagner, Ravensdale Lodge, Hasting-on-Hudson, New York. Interested in Literature and Pictures. Wants to secure some antique vehicles.

Will B. Murphey, 341¼ N. Oakhurst Drive, Beverly Hills, California. Interested in Literature, Emblems and Pictures. Wants to secure an antique auto.

John W. Buck, Jr., 83 East Strand, Kingston, New York. Owns Stearns Knight Sedan 1928 and Ford Roadster 1916. Interested in Literature Emblems, Radiator Ornaments and Pictures, especially Pictures.

Martin Bryant Atkinson, 644 Green Lanes, London, N.8. England. British Army Officer. Owns Turner-Miesse Steamer and Ford Touring, Model T. Interested in Literature, Lamps, Horns and Pictures.

E. Paul duPont, Montchanin, Del. Formerly President Indian Motorcycle Co. Retired. Owns Stearns Knight Baby Tonneau 1909, Chase Wagonette 1908, Buick Roadster 1909. Interested in Literature.

Richard C. Colyear, 1323 S. Flower St., Los Angeles, Calif. President Colyear Motor Sales Co. Largest distributor of Automobile parts in the Pacific Southwest.

A. S. Dale, 2118 Gentry St., North Kansas City, Mo. Owns Rolls-Royce Sedan 1928 and Peerless Sedan 1927.

Mrs. Ann Robinson, 3643 Revere Ave., Los Angeles 26, California.

C. M. Rogers, 2330 Topeka Blvd., Topeka, Kansas. Owns Stanley Steamer Model 735. Has an extra White engine and other steamer parts. Interested in Literature and Pictures.

O. L. Van Nostrand, 281 Cedar St., Bloomington, Calif. Owns Ford Coupe, Model T.

Douglas Bothwell, 141 N. Arden Blvd., Los Angeles, Calif. Former Naval Officer. Brother of Lindley F. Bothwell.

Mrs. Ransom B. Matthews, 186 Grove St., Sierra Madre, Calif. Doesn't own any antique automobiles but chief interest is in living long enough to see all of Ransom B. Matthews' (her husband) antique cars restored to their original perfection. Interested in automobile music and is looking for a musical bicycle. (Who isn't?)

John Raymond Utter, Valley View Farm, Route 5, Shawnee, Okla. Owns fourteen interesting automobiles beginning with a 1910 Lozier 4 cylinder stripped racing chassis. See his Ad in Wanted column.

Albert A. Casper, 3420 West 58th St., Cleveland 2, Ohio. Owns Pierce Arrow Sport Phaeton, 1929. Interested in Literature, Emblems and Pictures.

Albert J. Dunkel, 217½ N. Western Ave , Los Angeles 4, Calif. Interested in Literature.

OUR NEW MEMBERS *(CONTINUED)*.

Philip T. Hill, Jr. 218 20th St., Santa Monica, California. Owns Packard Fleetwood Town Car, 12 cylinders, 1918, and Pierce Arrow Le Baron Town Car, 1931. Interested in Literature and Pictures.

Paul D. Denison, 15247 So. Normandie Ave., Gardena, California. Owns Dodge 4 cylinder Roadster, Sears-Roebuck 2 cylinder Buggy, and Ford Model 5 Touring. Interested in Literature, Lamps and Pictures.

Howard C. Shaw, Jr. 527 Park Ave., River Forest, Illinois. Owns Curved-Dash Olds and 2 cylinder Maxwell Roadster. Literature, Lamps, Radiator Ornaments, Horns, Pictures.

Henry F. Cate, Jr., 130 Temple St., West Newton 65, Mass. Owns Rolls-Royce Silver Ghost Touring, 1921, and Rolls-Royce Phantom I Roadster, 1930.

Lieut. W. M. Parker, (Police Lieutenant), 111 Summit Ave., Willow Grove, Montg. Co., Penna. Owns Buick 4 cylinder Roadster, 1921. Interested in Lamps.

Jack D. Long, Gen. Del., Wailuku, Maui, Hawaii. Reports several antique cars in his locality, but not in very good condition. Interested in Sports Cars.

Elliott A. Wiener, 16039 Northfield St., Pacific Palisades, Calif. Owns Buicks, 1908, 1909, 1912, and 1920. Interested in Literature, Lamps, Horns, and Pictures. Wants to secure a 2 cylinder Buick.

Albert Mecham, 140 Michigan Ave., Highwood, Illinois. Commercial Photographer. Owns large collection of negatives of early racing events. Prints for sale. Write him for his price list.

Hans C. Hinrichs, 3101 Hawthorne Blvd., St. Louis 4, Mo. Owns about 20 high quality Custom Built automobiles, including Brewster, Cadillac, Lincoln, McFarlan, Packard, Peerless, Pierce Arrow, Rolls-Royce and Sterns . Mostly enclosed types. Anyone interested in high quality cars should write to Mr. Hinrichs who is an authority on these cars.

John W. Myers, P. O. Box 445, Willcox, Arizona. Interested in Steam Cars and Literature on same. Wants to secure a Steamer, or Engine, Boiler, etc., to build Steamer. Would like information on any Steamer that is to be manufactured and offered to the public.

Henry Sturges Ely, Jr., 1261 5th Ave., S. E., Cedar Rapids, Iowa. Mechanical Engineer. Has large collection early auto advertising now being used by Floyd Clymer. Interested in literature and pictures.

Doc Watson, D Street Auto Wrecking, San Bernardino, California.

Ralph E. Moeller, 2902 Center Point Road, Cedar Rapids, Iowa. Machinist. Has been interested in antique automobiles for many years. Literature and pictures.

M. B. Galloway, M. D., 546 West Second Street, Webster City, Iowa. Interested in everything pertaining to antique automobiles.

Fred Weber, Jr. Weber Showcase & Fixture Co., 5700 Avalon Blvd., Los Angeles 54, Calif. Executive. Owns Pierce one-cylinder which he has put in showroom condition.

Donald Nairn, 2120 Alsace Ave., Los Angeles 16, California.

FOR SALE.

Two bound volumes of MoToR for 1907 and 1908, complete with ads, Perfect condition. AUTO TRADE Journal $6.00 each. ACETYLENE HEADLAMPS $65.00 per pair up; Rushmores (small) $100.00 per pair; Mercer type $150.00. OIL SIDE LAMPS $40.00 pair up. TAIL LIGHTS $30. each up. BRASS HORNS (new) with bulbs and flexible tubes $45.00 each; other horns without bulbs or tubes $25.00 each up. All lamps and horns are brass.
HORSELESS CARRIAGES ; HAYNES APPERSON 2 cylinder, about 1903, $750.00. REO, one cylinder, as is $200.00. BUICK WHITE STREAK Roadster, all complete but needs work, $450.00. FRANKLIN 1910 Roadster, fine mechanically, all complete except headlamps, needs paint $650.00. PACKARD 4 cylinder, 1907, chassis only, you'll spend plenty of Sundays on this one fixing it up, $300.00. FORD Model T about 1912, tonneau missing, also needs work $125.00. BUICK 1913 Touring, new paint, fine mechanically, low mileage, all complete with top, windshield, speedometer and spare tire $800.00. CADILLAC 4 cylinder Coupe, 1913, fine condition throughout, good 37x5 tires, $1500.00. CADILLAC 1 cylinder, rear entrance tonneau, fine mechanically, 30x3 tires, $1250.00. AMERICAN UNDERSLUNG, 1915, 6 cylinder touring, O.K. mechanically, low mileage, all complete with top and windshield, good 37x5 tires, needs paint, $1500.00. See my ad in November 22, 1945 GAZETTE for two high wheelers stored in Duluth Minn., museum that are for sale. Photo of any car listed above 50¢. ARTHUR E. TWOHY, 400 N. Kenmore Ave., Los Angeles 4, California. (PAID ADD).

SET OF 15 POSTCARD PICTURES OF ANTIQUE AUTOMOBILES. 1903 Curved-dash Olds Roadster, 1905 National Electric Roadster, 1906 Success High Wheeled Roadster, 1906 Reo Roadster, 1906 Straight-dash Olds Roadster, 1907 Brush Roadster, 1909 Patterson Touring, 1909 Buick Model 10 Touring, 1910 Franklin Touring, 1911 Marmon Speedster, 1911 Hupmobile Roadster, 1911 Maxwell Roadster, 1911 Haynes Touring, 1913 Stanley 10 H.P. Touring, and 1914 Reo Touring. Order a set for your scrapbook or to mail to friends. Price $1.00 per set, postpaid. Send order to the Club Secretary.

1913 Rambler instruction book. Franklin Series 9-B Repairman's Manual. "Rolls Royce Memories", History of Rolls Royce. Privately printed. Ten full page plates. Ford type late model kerosene side lamps. 1918 Chevrolet Touring with busted rear end, $20.00. Richard Bissell, 645 Fenelon Place Dubuque, Iowa.

DUESENBERG Model J 4 door Sedan. Murphy body. A beauty. $1200.00. CADILLAC 4 cylinder, Touring, 2 speed rear end. Runs like new. $600.00. (1914). CORD Cabrolet. Runs fine. $375.00. (1930). GRANT Roadster, 1914, Runs fine. Electric starter and lights. $285.00. Will trade for 1908 - 1911 Hupmobile, 1936 - 1937 Cord, real estate, or what have you? Charles E. Patterson, 946 Embury St., Pacific Palisades, Calif. Ph. Santa Monica 41325.

1912 Franklin 4 cylinder touring; 1916 Locomobile "48"; 1916 Pierce-Arrow "38"; touring; Stanley Steamer; new Stutz parts including gaskets and some literature. Many different catalogues and radiator emblems. Few old license tags. Several 8 cylinder Stutz cars including DV32's. A. K. Millar, Montclair, New Jersey.

PHOTOS OF OLD TIME RACE EVENTS AND EARLY AUTOMOBILING. Write for new list showing reduced prices. ALBERT MECHAM, 140 Michigan Ave., Highwood, Illinois.

1904 Olds Curved-dash Roadster. Complete excepting chain and one brake drum. Body like new. The Goodrich white sidewall 28x3 tires are in fair condition. Price $750.00. Alton Walker, Box 156, Carmel, California.

34x4, 36x4½, and 37x5 tires. Ben Sharpsteen, 2324 Panorama Dr., La Crescenta, Calif.

1906 Reo Roadster. 1 cylinder. Folding rear seat. Good condition. Want Curved-dash Olds Roadster. John Carra, Jr. 1808 Canyon Drive, Hollywood 28, California.

FOR SALE.

LICENSE PLATES (New York) 1916 to 1938. 6 for $1.00. "Early bird gets the early plates." 25 pieces Automobile Literature, etc., $1.00. 12 Auto Magazines, $1.00. Have magazines, manuals, etc. Send your want list. Edward A. Moran, 3629 Oxford Ave., Riverdale, N. Y.

DODGE TOURING, 1915. Excellent condition. A. D. Nolan, 11110 State St., Lynwood, Calif.

ROLLS-ROYCE 1929 Brewster Brougham, LINCOLN V. 12, 1933 Murray body sedan. TESTAPHONE imported French bulb horn, 4 tones, brass finish. SPARTON CHIME, 3 tone electric air horn, nickel finish. KLAXON 12 volt electric horn (Stutz bearcat type) nickel finish. Rolls-Royce metal winter radiator front. Rolls-Royce P-1 radiator shell. Hispano Suiza metal winter radiator front. Auburn speedster chrome V type windshield. 1930 Cadillac V-16 radiator screen (will fit Hispano) also Cadillac 16 hood sides. 1933 Lincoln V-12 radiator shell and grill. C. A. Gaines, 732 W. Wisconsin Ave., Milwaukee, Wisconsin. (Mr. Gaines will also draw special designs for your luxury car or antique chassis Prices reasonable).

SENTINEL STEAM TRUCK. Located in Massachusetts. 1934 model. Ten ton. Ten wheels. Only car of its kind in United States or Canada. Good condition. STEAM BOAT POWER PLANT, Complete. Four cylinder single acting, reversible engine. Write for details. R. G. McCord, 529 66th Street, Oakland 9, California.

Solid 28x3 tire. Two 25 inch wheels and rims from 1909 Franklin, (outer side of rims removable). Indian side car complete with mounting brackets, fender, 28x3 wheel, good leather seat and back cushion. Age unknown, but it is old. Will sell above or trade for brass tail lamp or brass spider steering wheel. Frank Stokes, 441 W. Cypress Ave., Covina, California

REPRINT OF APRIL 21, 1906 AUTOMOBILE ISSUE OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. This magazine is an accurate record of the stage through which American motoring was passing in 1906, written by practical users of cars, with no trade or sporting angle. Even the busy doctors who bought cars for purely practical purposes, became enthusiasts. Many pictures of early cars, and several old car ads. If you do not already have a copy of this magazine you should send for one by all means. Price 75¢. Send order to the Club Secretary.

CADILLAC TOURING CAR, One cylinder, Motor Number 708, originally shipped to John Wanamaker, Philadelphia, June 20, 1903. Car in good running condition. FORD TOURING Model T, 1911, motor number 37,762, just rebuilt. Good condition. CURVED-DASH OLDS, very early model, excellent condition and runs like a charm. Frank McKee, Jr., 615 North Pearl Ave., Joplin, Missouri.

CARTERCAR TOURING. 1913. Driven less than 4000 miles. Mechanically perfect. Needs paint and some upholstering. No tires. $125.00. FRANKLIN SEDAN, 1923. Excellent condition. 4 new tires. Make offer. Will swap following tires for new 30x3½ Clincher. 2 34x4½ Straight side. 3 32x4 Straight side. Fine condition. J. E. Vanderveer, 26 Emerson Street, Kingston, New York.

MAXWELL ROADSTER, about 1906, 2 cylinder. Brand New Tires, Paint, and Upholstery. Fine mechanically, $800.00. ARTHUR E. TWOHY, 400 N. Kenmore Ave., Los Angeles, California.

BRUSH ROADSTER, 1910. Showroom condition. Absolutely perfect in every particular. Make an offer. Mel Anderson, 2013 Edgewood Drive, Alhambra, California.

WANTED.

Literature on MCFARLAND 1923, and BUICK 1908 to 1920. Elliott A. Wiener, 16039 Northfield Ave., Pacific Palisades, California.

WANTED.

WANTED, NEW MEMBERS FOR THE HORSELESS CARRIAGE CLUB. If you know of anyone interested in this HORSELESS CARRIAGE HOBBY send his name and address to the CLUB SECRETARY. An application for membership blank and a copy of THE GAZETTE will be mailed to the prospective member immediately.

WHITE STEAMER and MAXWELL Catalogues. J. E. Vanderveer, 26 Emerson St., Kingston, N. Y.

STANLEY STEAMERS, of any year or model, but more particularly of 1922, 1923, 1924, and 1925. Can use any part of any model. Tires, tubes and flaps for SENTINEL STEAM TRUCK Size 9.75 x 24, or any large size that will fit a 24 inch rim. R. G. McCord, 529 66th St., Oakland 9, California.

35 mm. KODACHROMES OF ANTIQUE OR UNUSUAL AUTOMOBILES. The following members are making collections of these pictures. Why don't you start a collection also? If you have some to trade write to these members:

Herbert Royston, P. O. Box 503, West Los Angeles 25, Calif.
Frederick E, Bissell, Jr., 325 Alpine St., Dubuque, Iowa.
W. Jack Down, P. O. Box 146, East Lansing, Mich.

MERCEDES BENZ or other foreign sport car. Mercer Raceabout, Stutz Bearcat, Locomobile Sportiff. Any antique automobile. Buick chassis complete, 1938 to 1942, with motor. Auto accessories and parts for Foreign, Antique or luxury cars, radiator shells, radiator ornaments, emblems, etc. Chrome plated Buell Airhorns. Chrome plated hood exhaust pipes (Mercedes or Duesenberg type). Complete speedster or roadster body, (any make). C. A. Gaines, 732 W. Wisconsin Ave., Milwaukee, Wisc.

STUDEBAKER TOURING, complete 1914 six cylinder, seven passenger, in any condition suitable for restoration. Instruction book or other literature or spare parts for 1912 model 44 Abbott-Detroit. Want to hear from owners of Abbott-Detroit automobiles. PRESTO-LITE STARTER. 4 cylinder acetylene complete with fittings. Various popular sizes of high-pressure tires, new and used, to trade. LUTHER S. WATSON, 141 33rd Street Drive S. E., Cedar Rapids, Iowa.

Pair of McBeth or Stewart Warner Headlamp Lenses. Diameter 9¼ inches. William Cain, 1918 Washington Ave., S. E., Cedar Rapids, Iowa.

PIERCE ARROW SERVICE MANUAL for 1929 models. Sgt. Albert A. Casper, 3706 AAF BU, Sqd A Sheppard Field, Wichita Falls, Texas.

Sportcars, Touring Cars, Prior to 1928. (No Ford Model Ts). Must be priced reasonably. Edward A. Moran, 3629 Oxford Ave., Riverdale, New York.

Square top brass radiator for early Ford Model T. Ford make. KARL WEBER, 12834 Highwood St., Los Angeles 24, Calif.

Want Automobile hand books 1904, 1909, 1910, 1914, 1915, and 1923. Have duplicate issues for 1919, 1921, and 1922 to trade. Major Lenox R. Lohr, Museum of Science and Industry, Chicago 37, Illinois.

FORD MODEL T, 1914 or earlier. MAXWELL 2 cylinder. OLDSMOBILE OR BRUSH one cylinder. Must be suitable for reconstruction and reasonably priced. Louis M. Paul, 1167 E 66th Street, Los Angeles 1, California.

Snap ring for Houk Wire Wheel with 25 inch rim (Takes 35x5 or 34x4½ tire. Will pay premium price for same. Wm. G. Cain, 1918 Washington Ave., S. E., Cedar Rapids, Iowa.

WANTED.

Instruction book for STUTZ DV-32, preferably 1933. Will buy, borrow, rent, or swap. P. S. de Beaumont, Apex Elec. Mfg., Co., Cleveland 10, Ohio.

Wanted for 1914 Rolls-Royce. C. A. V., Electric sidelights, 3 inches in diameter. Rolls-Royce clock. Instruction books for 1914 Rolls-Royce, 1909 Kissel Kar, and 1910 Buick. Will trade for above items from a collection of Antique lamps, horns, tires, speedometers, etc. R. L. Feind, "Shorecrest", Milwaukee 2, Wisconsin.

Dietz Dainty Tail lamp with bail in fine shape, or 6 new fuel valves for White 20 H. P. Flowmotor of 1909 car. Will swap for above one 37x4½ clincher tire, never used, soft like new. Will also swap for one White superheater coil of 1909 twenty H. P. boiler, new. Would like to correspond with OWEN-MAGNETIC car owners, also ROLLS-ROYCE enthusiasts. Have old car catalogues to trade for Rolls-Royce and Owen-Magnetic catalogues. MURRAY BROWN, ATHOL, MASS.

WANT RACING CAR PHOTOGRAPHS. Old or late. Interested in securing entire collections. What have you? JOSEF REUTERSHAN, 222 Paulison Ave., Passaic, New Jersey.

STANLEY, WHITE or other Steamer wanted. Or a complete power plant, engine, boiler, condenser, fittings, etc., to convert gas car into a steamer. Information on Doble and Delling Steamers. JOHN W. MYERS, P. O. Box 445, Willcox, Arizona.

Wish to purchase singles or collections of auto name emblems. Have literature and name emblems to trade for emblems or what have you? Printed emblem list free. Write for it. RUDOLPH ZAK, P. O. Box 1554, Station C, Cleveland 4, Ohio,

Want two 33x4 Clincher rims for 1915 Dodge. Robert Mowry, 1617 Arlington, Apt. 2, Torrance, California.

Wanted. 1908 or 1909 White 20 H. P. Engine. Condition not important. Baker rear axle and engine. STANLEY ALLRED, Route 1, Warren, Indiana.

LOCOMOBILE hood. Disco or other acetylene starter. 30x3½ solid tires. STUTZ and HCS catalogues and literature, especially 4's and 6's, Baker rim, 34x4½. Any unusual Stutz or HCS cars, any condition anywhere. A. K. MILLAR, MONTCLAIR, N. J.

Wants parts for Model J DUESENBERG. One front spring, starter drive universal joints, carburetor, cam shaft covers. Also late model Cord Convertible, any condition. CHARLES E. PATTERSON, 946 Embury St., Pacific Palisades, Calif. Ph. Santa Monica, 41425.

Pair of Drum Headlamps for Rolls-Royce P-I, or what have you? Also 35x4½ tires. Need instruction book for 1925 Rolls-Royce Silver Ghost (American). Will trade license plates year for year. RICHARD BISSELL, 645 Fenelon Place, Dubuque, Iowa.

STEAMERS! STEAMERS! STEAMERS. Who's got all the Steamers? Will buy or trade. Any condition. Walter Deitchman, 2828 Harrison, Kansas City, Mo.

Want 2 cylinder Buick to restore. Elliott A. Wiener, 16039 Northfield Ave., Pacific Palisades, California.

Matched pair of 10¼ inch old style headlamp lenses. Visor type, Prismatic or Amber. Will trade automobiliana or buy. Luther Watson, 141 33rd St., Drive. S. E. Cedar Rapids, Iowa.

WANTED. License tags, name plates, literature, and all types of automobiliana. Will trade or purchase. SWIGART MUSEUM, Huntingdon, Penna.